DR Barometer
Shifting the needle

The Diabetic Retinopathy Barometer Report

Algeria

IFA
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International Diabetes Federation
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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 Algeria.

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.

The 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 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

TThe 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 (WHO) and the World Bank Income Group (WBIG).

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 through a systematic literature review.

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

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

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

Study Populations

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

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

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

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

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

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

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

Introduction
Algeria Study

Demographic Characteristics[1]

Algeria is estimated to be the ninth most populous country in Africa with a population of approximately 40.3 million inhabitants.

According to most recent statistics as of 2016, it is estimated that 29% of the population is under the age of 15 years and 6% over the age of 65.

By 2050, the population distribution in Algeria is expected to increase by ~40%. However, there will be a decrease in the percentage of those 15 years of age and younger (~20%) and a drastic increase of ~289% for those aged 65 years or older. In just over 30 years the population of 65 years or older will reach an all-time high of approximately 9.5 million, about 17% of the total population.

Diabetes Profile[2]

There are 415 million people living with diabetes and more than 35.4 million people are in the Middle East and North Africa Region. By 2040, this number if expected to rise to 72.1 million.

The IDF Middle East and North Africa Region ranges from Iran, Pakistan, Sudan, and Morocco. This region, over the past three decades, has experienced major social and economic changes that have transformed many of the countries. With 35.4 million people living with diabetes in this region, it is important to note that 40.6% of these are undiagnosed and the vast majority (83.9%) of people living with diabetes are living in low- or middle-income countries.

Algeria has over 1.7 million (1,157.6-2,359.5‡) adults living with diabetes, which accounts to ~5% of people living with diabetes in this region. The diabetes national prevalence in Algeria (20 – 79 years) is 6.8% (4.7-9.5‡) and the diabetes age-adjusted comparative prevalence is 7.5% (5.1-10.3‡).

Deaths attributed to diabetes in Algeria, in 2015, were 14,067, which accounts to ~4% of the diabetes related deaths experienced in this region. The estimated number of undiagnosed cases was 693,800 (599.8-1,222.7‡).

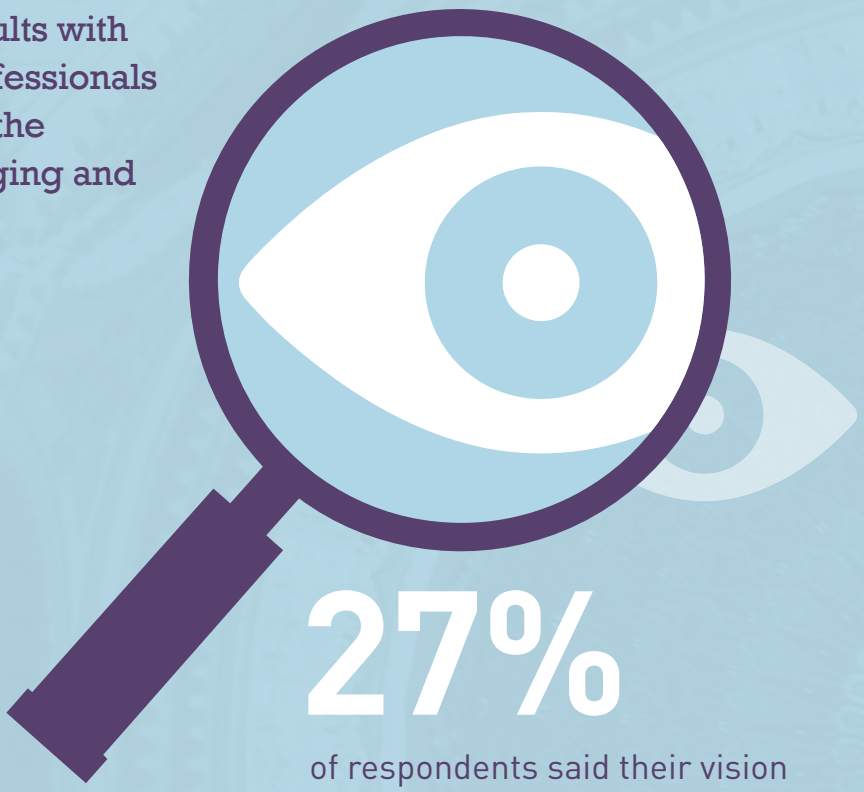
Study Populations: Algeria

As reported by 68 respondents with diabetes in Algeria, 19% of respondents were diagnosed with DED and a further 13% with DME.

One hundred and fifty-nine health care professionals completed the survey in Algeria. Of these, 67 were diabetes specialist providers (42%), 44 were ophthalmologists (28%) and 37 were primary care providers (23%). The remaining respondents were either optometrists, health educators or other types of professionals.

The DR Barometer Study: **Algeria Overview**

The DR Barometer study was conducted in 41 countries. In Algeria, 68 adults with diabetes and 159 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.



57%

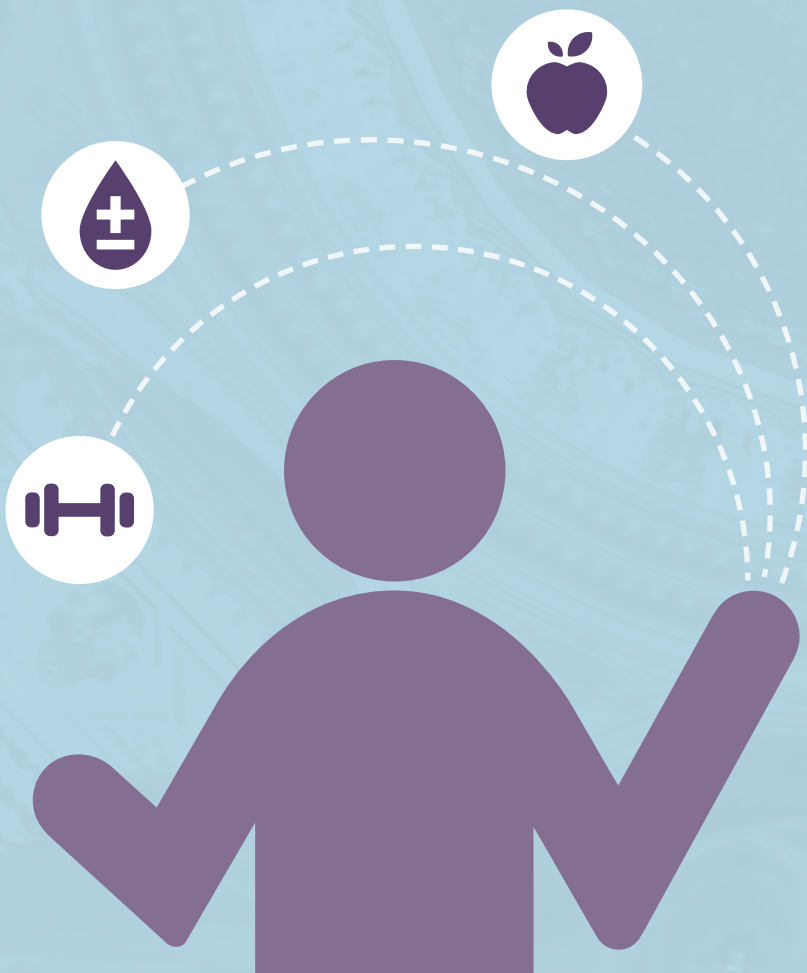
of patients said that **cost** was a barrier to eye exams

27%

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

64%

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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100%

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

86%

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

35%

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

52%

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

Algeria
DR Barometer Findings:
Adults with Diabetes

Key Demographic Characteristics

Sixty-eight adults with diabetes (patients) completed the patients' survey in Algeria: 38% were female and 62% were male. Eighty-seven percent lived in an urban setting and 13% in a non-urban setting (see Appendix Table 4.2).

The education level of all respondents were as follows: 6.5% did not complete primary school, 4.3% were educated to a primary school level, 22% to a secondary school level, 57% to a college or university level, and 11% to a graduate or post-graduate level (see Appendix Table 4.3).

Fifty percent of all respondents were in paid employment, 13% were retired, and 28% were not working (see Appendix Table 4.4).

Most respondents (49%) were aged between 40 and 59 years (28% were aged 18-39 years and 24% were 60-79 years). Seventy-six percent were of traditional working age (18-59 years) (see Table 1).

Of the respondents in Algeria, 31% had been diagnosed with type 1 diabetes and 65% with type 2 diabetes. A further 4.4% of respondents were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Nineteen percent of respondents (n=13) had been diagnosed with DED and a further 13% (n=9) had DME.

Eight percent of those surveyed were diagnosed with diabetes within the last year, 1 - 5 years ago (19%), 6 - 10 years ago (29%), 11 - 15 years ago (18%), 16 - 20 years ago (13%), and 21 years ago or more (11%) (see Appendix Table 2.2).

Amongst 18 to 39 year-olds, 53% had type 1 and 47% had type 2 diabetes. In the 40-59 age group, 24% had type 1 and 73% had type 2 diabetes, 19% of 60-79 year-olds had type 1 diabetes and 69% had type 2.

In people aged 18-39 years, 26% had DED and 11% had DME. In those aged 40-59 years, 12% had DED and 15% had DME, and for people aged 60-79 years, 25% had DED and 13% had DME.

In the first 5 years since diagnosis of diabetes, no respondents had DED or DME. For those diagnosed with diabetes for 16-20 years, 13% had DED and 63% had DME. For those diagnosed 21 years or longer, 29% had DED and 43% had DME.

While most (57%) respondents reported that their diabetes was well controlled, 41% felt that this was not the case. For those who felt their diabetes was controlled, 14% had DED and 10% had DME. Within the group whose condition was not well controlled, 38% had DED and 29% 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		68 (100.0%)	21 (30.9%)	44 (64.7%)	13 (19.1%)	9 (13.2%)
Gender	Male	29 (61.7%)	11 (37.9%)	18 (62.1%)	4 (13.8%)	8 (27.6%)
	Female	18 (38.3%)	4 (22.2%)	12 (66.7%)	8 (44.4%)	1 (5.6%)
	Total Missing	21	6	14	1	0
Age	18-39 yrs.	19 (27.9%)	10 (52.6%)	9 (47.4%)	5 (26.3%)	2 (10.5%)
	40-59 yrs.	33 (48.5%)	8 (24.2%)	24 (72.7%)	4 (12.1%)	5 (15.2%)
	60-79 yrs.	16 (23.5%)	3 (18.8%)	11 (68.8%)	4 (25.0%)	2 (12.5%)
Time since diagnosis	Within the last year	5 (7.9%)	0 (0.0%)	5 (100.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 yrs.	12 (19.0%)	3 (25.0%)	9 (75.0%)	0 (0.0%)	0 (0.0%)
	6 - 10 yrs.	18 (28.6%)	4 (22.2%)	13 (72.2%)	7 (38.9%)	0 (0.0%)
	11 - 15 yrs.	11 (17.5%)	5 (45.5%)	6 (54.5%)	3 (27.3%)	1 (9.1%)
	16 - 20 yrs.	8 (12.7%)	3 (37.5%)	4 (50.0%)	1 (12.5%)	5 (62.5%)
	21 yrs. plus	7 (11.1%)	4 (57.1%)	3 (42.9%)	2 (28.6%)	3 (42.9%)
	Don't know/ Not sure	2 (3.2%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	5	2	3	0	0
Control of Diabetes	Controlled	29 (56.9%)	7 (24.1%)	21 (72.4%)	4 (13.8%)	3 (10.3%)
	Not controlled	21 (41.2%)	9 (42.9%)	11 (52.4%)	8 (38.1%)	6 (28.6%)
	Don't know/ Not sure	1 (2.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	17	4	12	1	0

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

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

NB [3]: 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

Eighty-four percent of those surveyed saw a health care professional for their diabetes, with 67% seeing a diabetes specialist (average number of visits was 3.8 times per year) and 29% seeing a general or family doctor (average number of visits was 3.3 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Eighty-three percent received information from a doctor or nurse, 29% from the TV, radio, newspaper, magazines and from the internet, and one in five respondents turned to a diabetes, or other health, organisation for information (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=58)
Doctor or nurse	48 (82.8%)
TV/Radio/Newspaper/Magazines	17 (29.3%)
Internet	17 (29.3%)
Family/Friends/Neighbours	15 (25.9%)
Diabetes organisation or other health organisation	12 (20.7%)
Social media (e.g. Facebook, Twitter, blogs)	9 (15.5%)
Health educator	8 (13.8%)
Nutritionist or dietician	5 (8.6%)
Pharmacist	4 (6.9%)
None of the above	4 (6.9%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 47% managed their diabetes with diet and 37% with exercise. Of the respondents with type 2 diabetes, 70% reported that they managed their condition with diet, 70% with oral medicine, 32% with insulin, and 27% with exercise.

Fourteen percent of respondents were enrolled in diabetes management programmes, and of these, 71% of respondents said the programme 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 (94%), these occurred at the following intervals: less than 6 months (42%), 6 - 12 months (30%), and greater than 12 months (16%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: it was too hard to eat the right things (60%), there were too many other things to do (27%), the high cost of care (23%), travel to their regular doctor or specialist was difficult (23%), and there were long wait times to schedule an appointment to see their doctor or specialist (21%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (75%), support from family or friends (58%), health education and information (31%), coordination of healthcare and services by a professional (15%), and support groups (14%) were identified as important to improving the management of their diabetes (see Appendix Table 2.10).

Nature and Information about Complications

Eighty-two percent of respondents were aware of vision loss and other complications, such as amputation (80%), kidney disease (77%), foot ulcers (67%) and cardiovascular disease or stroke (61%), were associated with diabetes (see Appendix Table 2.11).

Respondents were most concerned about vision loss (48%), amputation (18%), kidney disease (12%), cardiovascular disease or stroke (12%), and neuropathy (4%) (see Appendix Table 2.12).

Fifteen percent of respondents reported that they had no complications of diabetes. However, of those who did have complications, 53% had vision loss, neuropathy (15%), kidney disease (15%), cardiovascular disease or stroke (15%) and amputation (8.8%) (see Figure 1 and Appendix Table 2.13).

Aside from vision loss, there was an increase in the frequency of people with DED and DME experiencing certain complications compared to people without DED. The frequency of kidney disease increased from 4.3% in those without DED to 29% with DED and 50% with DME. Likewise cardiovascular disease, increased from 13% in people without DED to 14% with DED and 25% with DME (see Table 3 and Appendix EXP 1).

Figure 1: Presence of complications

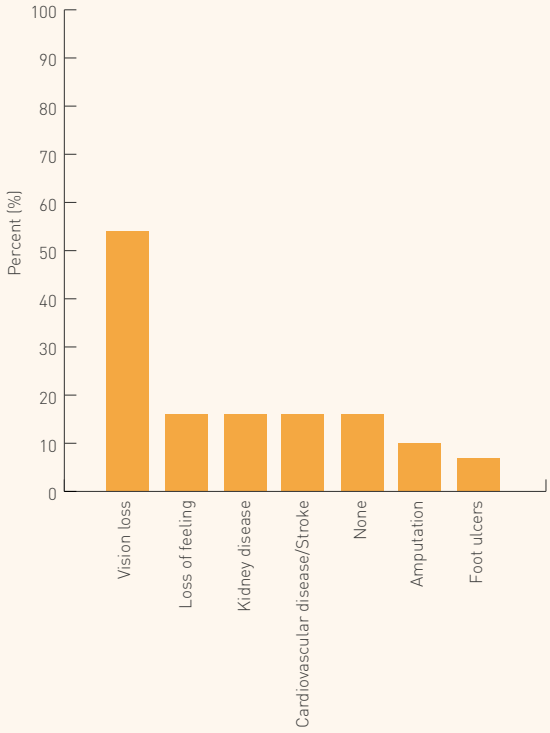


Table 3: Complications experienced

Complication	Without DED (n=23)	With DED (n=7)	With DME (n=4)
Any	19 (82.6%)	7 (100.0%)	3 (75%)
Vision loss	11 (47.8%)	5 (71.4%)	2 (50.0%)
Loss of feeling in hands or toes (neuropathy)	2 (8.7%)	3 (42.9%)	0 (0.0%)
Kidney disease	1 (4.3%)	2 (28.6%)	2 (50.0%)
Cardiovascular disease/Stroke	3 (13.0%)	1 (14.3%)	1 (25.0%)
Amputation	2 (8.7%)	1 (14.3%)	0 (0.0%)
Foot ulcers	2 (8.7%)	0 (0.0%)	0 (0.0%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)
None	4 (17.4%)	0 (0.0%)	1 (25.0%)

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

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

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

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

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

Information about Diabetic Eye Disease and Diabetic Macular Edema

Eighty-eight percent of respondents stated that eye complications were discussed with their health care professionals. Notwithstanding this, one in three patients (35%) either never discussed eye complications with their health care professionals (10%) or discussion only took place once symptoms arose (25%). The frequency of regular discussions varied from every visit (40%), multiple times a year (17%), and once a year (6.3%) (see Appendix Table 2.14).

Seventy-two percent of reported that they did what they could to prevent vision problems (e.g. get routine screenings, visit specialists), yet 17% thought that vision problems were a normal part of ageing and 23% made no special effort to have a preventative approach to their eye health (see Appendix Table 2.15).

Seventy-six percent of all respondents had received information about DR and DME, with the doctor or nurse being the most common source (57%). An important finding to note, almost one in four respondents did not receive such information from any of the traditional sources listed; including one in two not receiving any information from their doctor (see Table 4 and Appendix Table 3.9).

Table 4: Sources of information regarding diabetic retinopathy and diabetic macular edema

Source	All respondents (n=46)
Doctor/Nurse	26 (56.5%)
Internet	6 (13.0%)
Health educator	5 (10.9%)
Family/Friends/Neighbours	5 (10.9%)
Diabetes organisation or other health organisation	4 (8.7%)
TV/Radio/Newspaper/ Magazines	4 (8.7%)
None of the above	11 (23.9%)

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 (87%) respondents reported having an eye exam for DED, with 83% reporting to have had an eye exam within the last year and a further 9.5% more than one year ago but less than two years ago. Seventeen percent of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1 and Table 3.2).

While 83% of those surveyed thought they should have their eyes examined for DED once a year, there were a varied smaller number of respondents who thought that testing should happen every two years (see Appendix Table 3.4).

The biggest barriers to eye exams were that they were expensive (57%), the long wait times on the day of the visit (53%), and the long wait time to schedule an appointment (34%). One in four respondents cited that eye exams were not available near their place of residence (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=47)
They are expensive	27 (57.4%)
Long wait time on the day of the visit	25 (53.2%)
Long wait time for appointment	16 (34.0%)
Eye exams are not available near my home	12 (25.5%)
Too many other things to do or worry about	8 (17.0%)
Burden on my family/friends	6 (12.8%)
Recommended treatments for eye problems are not available	4 (8.5%)
Limited access to diabetes specialists	4 (8.5%)
I'm not likely to have eye complications	4 (8.5%)
Clinics are too small or lack necessary equipment/staff	3 (6.4%)
Referral process is complicated or takes too long	2 (4.3%)
Don't know much about my condition	1 (2.1%)
Fear of treatment/results	1 (2.1%)
Eye exams are not important	1 (2.1%)
Other	8 (17.0%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately in people with DED and in those with DME. Thirty-nine percent (n=5) of those with DED had received treatment, the most common being laser treatment (80%). Of those who received treatment, one respondent had completed their treatment and two were still receiving treatment. One respondent reported that treatment had been successful and their vision had stayed the same (see Table 6).

For the eight respondents with DED who had not received treatment, the most common reason reported was that their doctor did not recommend any treatment (71%).

Seventy-five percent of patients with DME (n=6) had received treatment and the most common treatments were laser (100%) and anti-VEGF (33%). Four respondents (67%) completed their treatment and sixty percent felt that the treatment had been successful and their vision either had improved (40%) or had stayed the same (20%). One respondent felt that treatment did not work.

There was a strong preference among those with DME (89%) 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 in respondents with diabetic eye disease (DED) and diabetic macular edema (DME)

Question	Response	With DED (n=12)	With DME (n=8)
Have you had any treatment for diabetic eye disease?	Yes	5 (38.5%)	6 (75.0%)
	No	8 (61.5%)	1 (12.5%)
	Don't know/Not sure	0 (0.0%)	1 (12.5%)
What treatment did you receive?	Laser	4 (80.0%)	6 (100.0%)
	Anti-VEGF	1 (20.0%)	2 (33.3%)
	Surgery	1 (20.0%)	1 (16.7%)
	Other	1 (20.0%)	0 (0.0%)
Did you complete the treatment?	Yes	1 (20.0%)	4 (66.7%)
	No	1 (20.0%)	1 (16.7%)
	Still receiving treatment	2 (40.0%)	0 (0.0%)
	Don't know/Not sure	1 (20.0%)	1 (16.7%)
Do you feel that the treatment worked?	Yes, and vision improved	0 (0.0%)	2 (40.0%)
	Yes, but vision stayed the same	1 (33.3%)	1 (20.0%)
	No	0 (0.0%)	1 (20.0%)
	Still waiting to know	1 (33.3%)	1 (20.0%)
	Don't know/Not sure	1 (33.3%)	0 (0.0%)
What is/are the reason(s) that you did not complete the treatment?	Treatment was too expensive	0 (0.0%)	1 (100.0%)
	I was fearful (scared) of treatment	0 (0.0%)	1 (100.0%)
	Other	1 (100.0%)	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 (71.4%)	1 (100.0%)
	Treatment is not accessible	1 (14.3%)	0 (0.0%)
	Too expensive	1 (14.3%)	0 (0.0%)
	No insurance	1 (14.3%)	0 (0.0%)
	I'm fearful of treatment	1 (14.3%)	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-six percent of those diagnosed with DED or DME said that their vision was affected (52% significantly, 24% slightly) (see Appendix Table 3.6).

All of these respondents reported that vision issues impacted their daily lives in various ways, such as difficulty experienced in driving a vehicle (53%), travelling (40%), working or keeping a job (40%), social interactions with family or friends (27%), leisure activities or exercise (27%), managing their underlying diabetes (27%), and household responsibilities, such as cooking or cleaning (20%) (see Table 7).

Table 7: Vision issues that affect daily lives

	All Respondents (n=)
Driving (a car/vehicle)	8 (53.3%)
Travelling	6 (40.0%)
Work or keeping a job	6 (40.0%)
Social interactions with family/ friends	4 (26.7%)
Leisure activities/exercise	4 (26.7%)
Managing my diabetes	4 (26.7%)
Household responsibilities, such as cooking or cleaning	3 (20.0%)

Thirty-six percent of those with DED and 44% with DME were in paid employment, compared to 58% of respondents without DED. Respondents with vision complications reported difficulties with work or keeping a job (40%) and of those diagnosed with DED (55%, n=6) were not working (see Table 8 and Appendix EXP 5.1).

Although sixty-four percent of those surveyed did not receive assistance from the government, 14% (n=6) received income assistance (see Appendix Table 4.5). There was a variance in those who received government assistance 28% of those without DED received government assistance compared to 60% of those with DED and 33% of those with DME.

Seventy-six percent of all respondents said they had no trouble paying for food at any time during the past year (see Appendix Table 4.6). However, 36% with DED and 44% with DME reported difficulty with paying for food compared to 12% of those without DED.

Over a third of respondents (37%) felt that their access to health care was affected by certain factors such as their level of income (21%) or place where one lives (16%) (see Appendix Table 4.7).

Sixty-one percent of respondents said they worried about their health, 11% about family, and 8.7% were concerned about their housing needs (see Appendix Table 4.8).

Table 8: Socio-economic impacts

Question	Response	Without DED (n=26)	With DED (n=11)	With DME (n=9)
Are you currently working?	Working for pay	15 (57.7%)	4 (36.4%)	4 (44.4%)
	Working without pay at home (e.g. housework, farming)	1 (3.8%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (3.8%)	0 (0.0%)	0 (0.0%)
	Retired	4 (15.4%)	1 (9.1%)	1 (11.1%)
	Student	2 (7.7%)	0 (0.0%)	0 (0.0%)
	Not working	3 (11.5%)	6 (54.5%)	4 (44.4%)
Question	**Response**	**Without DED (n=25)**	**With DED (n=10)**	**With DME (n=9)**
Do you receive assistance from the government?	Income assistance	3 (12.0%)	2 (20.0%)	1 (11.1%)
	Medical assistance	2 (8.0%)	3 (30.0%)	0 (0.0%)
	Pension assistance	3 (12.0%)	1 (10.0%)	2 (22.2%)
	None of the above	18 (72.0%)	4 (40.0%)	6 (66.7%)
Question	**Response**	**Without DED (n=25)**	**With DED (n=11)**	**With DME (n=9)**
Did you have trouble paying for food at anytime during the past year?	Yes	3 (12.0%)	4 (36.4%)	4 (44.4%)
	No	22 (88.0%)	7 (63.6%)	5 (55.6%)

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

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

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

NB [4]: 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.

Sixty-four percent of people with DED, and 78% with DME, reported self-rated health as poor compared with 31% of people without DED. People with DED and DME also experienced a greater impact on their physical and mental health. Sixty percent of people with DED, and 71% with DME, had physically unhealthy days whilst 35% of those without DED reported a series of physically unhealthy days. Likewise, 57% of those with DED, and 86% of those with DME, had mentally unhealthy days compared with 14% of people without DED (see Table 9).

Twenty-six percent of those without DED, 58% of people with DED and 63% 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, vision problems and back or neck problems (see Appendix EXP 2).

Table 9: Health status by diabetes patients with and without DED and DME

Health Status	Without DED	With DED	With DME
Self-rated health: Good	18 (69.2%)	4 (36.4%)	2 (22.2%)
Self-rated health: Poor	8 (30.8%)	7 (63.6%)	7 (77.8%)
Physically unhealthy days	6 (35.3%)	3 (60.0%)	5 (71.4%)
Mentally unhealthy days	2 (14.3%)	4 (57.1%)	6 (85.7%)
Unhealthy days	7 (53.8%)	5 (83.3%)	7 (87.5%)
Activity limitation days	4 (30.8%)	7 (87.5%)	4 (57.1%)

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

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

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

NB [4]: 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.

Algeria
DR Barometer Findings:
Health Care Professionals

Key Demographic Characteristics

There were 159 health care professionals who answered at least one of the survey questions in Algeria. Of these, 37 were primary care providers (23%), 67 were diabetes specialist providers (42%) and 44 were ophthalmologists (28%). The remaining respondents were optometrists, health educators or other types of professionals (see Appendix PT 1.3).

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

Health care professionals as a group had been practicing for an average of 19 years, with the ophthalmologist subgroup practicing for an average of 18 years (see Appendix PT 1.5).

Health care professionals were well educated (62% with graduate or advanced degree); 49% were female and 51% male, and the largest proportion (35%) were aged 40-49 years with a further 34% in the 50-59 age group (see Appendix PT 3.1 and Table 10).

Table 10: Provider characteristics

Group	Subgroup	All Respondents	Primary Care Provider	Diabetes Specialist	Ophthalmologist
All respondents		159 (100.0%)	37 (23.3%)	67 (42.1%)	44 (27.7%)
Age group	18 - 29 yrs.	2 (2.0%)	0 (0.0%)	1 (2.3%)	1 (3.7%)
	30 - 39 yrs.	21 (20.6%)	1 (4.8%)	9 (20.9%)	7 (25.9%)
	40 - 49 yrs.	36 (35.3%)	8 (38.1%)	15 (34.9%)	10 (37.0%)
	50 - 59 yrs.	35 (34.3%)	11 (52.4%)	15 (34.9%)	6 (22.2%)
	60 - 69 yrs.	8 (7.8%)	1 (4.8%)	3 (7.0%)	3 (11.1%)
Gender	Female	50 (49.0%)	10 (47.6%)	22 (51.2%)	14 (51.9%)
	Male	52 (51.0%)	11 (52.4%)	21 (48.8%)	13 (48.1%)
Education	College/University	38 (38.4%)	13 (61.9%)	16 (39.0%)	4 (14.8%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	61 (61.6%)	8 (38.1%)	25 (61.0%)	23 (85.2%)

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

Clinical Practice Characteristics

Thirty-one percent of all providers had their main practice setting in a hospital (31%), and for ophthalmologists the main settings were a hospital (52%) or eye clinic (43%). Ninety-eight percent of 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 (50%) (see Appendix PT 2.3).

The health care professionals reported that 57% of patients do not pay for services, 35% of patients pay out-of-pocket (full fees) for services, and 8.1% of patients pay a reduced or subsidised rate for services. The pattern was similar for ophthalmologist subgroup, where 50% of patients do not pay for services, 38% of patients pay out-of-pocket (full fees) for services, and 12% of patients pay a reduced or subsidised rate for services (see Appendix PT 2.7).

On average, all providers see 82 patients per week and an estimated 56% of these patients had diabetes. Ophthalmologists reported an average of 71 patients per week and 25% had diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was most commonly less than one week (28%), or more than one week but less than one month (24%) (see Appendix PT 2.5).

For an appointment with an ophthalmologist, the wait time was one and two months in 27% of practices, but for a further 35% the wait time was less than one month.

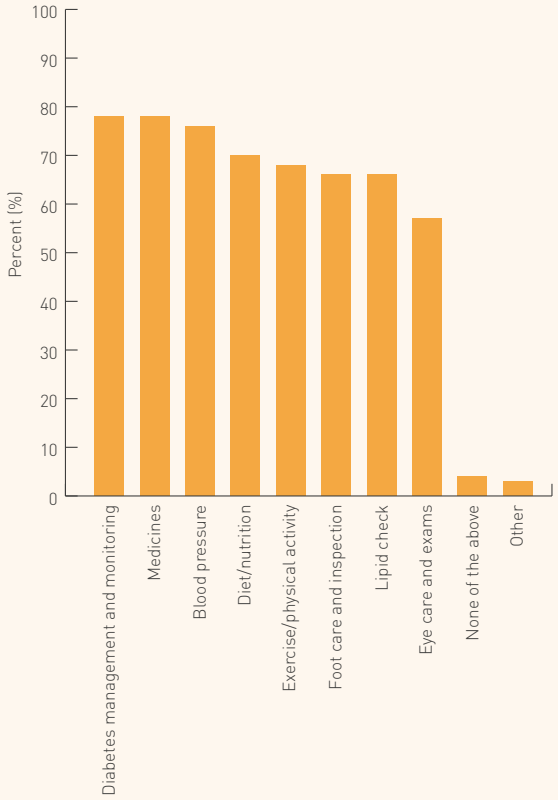
Table 11: Average waiting times for an appointment

Wait Time Intervals	All Respondents (n=126)	Ophthalmologist (n=34)
Less than 1 week	35 (27.8%)	6 (17.6%)
More than 1 week but less than 1 month	30 (23.8%)	6 (17.6%)
More than 1 month but less than 2 months	17 (13.5%)	9 (26.5%)
More than 2 months but less than 3 months	15 (11.9%)	6 (17.6%)
More than 3 months but less than 6 months	8 (6.3%)	4 (11.8%)
Do not take appointments	17 (13.5%)	3 (8.8%)
Other	2 (1.6%)	0 (0.0%)
Don't know/Not sure	2 (1.6%)	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).

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



Health care professionals stated that written information about diabetes is available yet the adequacy of that related to eye complications varies.

Twenty-seven percent reported that they had sufficient information about eye complications, 12% had information on diabetes but that which was on eye complications was insufficient;19% reported that information on eye complications was not included in available materials. Overall, a third (36%) of providers had no written information available at all for their patients (see Table 12 and Appendix PT 2.11).

Sixty-seven percent of ophthalmologists said there was no written information on either diabetes or potential eye complications available at all for their patients. Some (13%) reported to have had sufficient written information and 10% had information on diabetes, but that which was on eye complications was either insufficient (7.3%) or not included (3.3%).

Guidelines and Protocols

Forty-four percent of all providers, including 57% of ophthalmologists, did not have written protocols for the management of diabetes available for staff (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, 64% of all providers, including 47% of ophthalmologists, did not have written protocols available for staff (see Table 12 and Appendix PT 2.13).

Table 12: Availability of information and protocols at provider practice

Question	Response	All Respondents (n=109)	Ophthalmologist (n=30)
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	29 (26.6%)	4 (13.3%)
	Yes, but information on eye complications is not sufficient	13 (11.9%)	2 (6.7%)
	Yes, but no information on eye complications is included	21 (19.3%)	1 (3.3%)
	No written information is available for patients	39 (35.8%)	20 (66.7%)
	Don't know/Not sure	7 (6.4%)	3 (10.0%)
Question	**Response**	**All Respondents (n=109)**	**Ophthalmologist (n=30)**
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	28 (25.7%)	13 (43.3%)
	Yes, available but not used by staff	4 (3.7%)	1 (3.3%)
	Not available	70 (64.2%)	14 (46.7%)
	Don't know/Not sure	7 (6.4%)	2 (6.7%)

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

Screening Protocols and Barriers in the Care Pathway

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

For those with type 1 diabetes, 47% of all providers reported that the initial eye exam should occur at time of the diagnosis of diabetes. For patients with type 2 diabetes, 82% of all providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, 94% of health care professionals, including 97% of ophthalmologists reported that follow-up eye examinations should be conducted every year. Most health care professionals (87%), including 97% of ophthalmologists screen patients for DR (see Appendix PT 2.15 and PT 2.16).

Across all health care professionals, 35% reported that they send reminders to their patients for general follow-up appointments (see Appendix PT 2.19).

Eighty percent of the health care professionals, including 85% of ophthalmologists, shared information with other providers to optimise patient care management (see Appendix PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for health care professionals were: the duration of diabetes (97%), presence of comorbidities such as hypertension (90%), high glucose levels (78%), a patient's age (70%), and a patient's ability to adhere to recommendations (44%) (see Appendix PT 2.17).

Table 13: Barriers for optimising eye health

Response	All Respondents (n=)	Ophthalmologists (n=)
Lack of knowledge and/or awareness	49 (48.0%)	18 (66.7%)
Patients fear of treatment/results	48 (47.1%)	17 (63.0%)
Cost of care	69 (67.6%)	16 (59.3%)
Long wait time on the day of visit	46 (45.1%)	14 (51.9%)
Limited access to eye specialists	41 (40.2%)	14 (51.9%)
Proximity to care	42 (41.2%)	11 (40.7%)
Long wait time for appointment	60 (58.8%)	11 (40.7%)
Patients feel eye complications are unlikely	25 (24.5%)	9 (33.3%)
Limited access to diabetes specialists	16 (15.7%)	8 (29.6%)
Patients feel eye exams are not important	20 (19.6%)	6 (22.2%)
Patients have competing responsibilities and priorities	16 (15.7%)	6 (22.2%)
Clinic too small or lack necessary equipment/staff	28 (27.5%)	6 (22.2%)
Recommended treatments are not available	21 (20.6%)	5 (18.5%)
Patients feel they are a burden on family/friends	12 (11.8%)	5 (18.5%)
Referral process	8 (7.8%)	3 (11.1%)
Other	5 (4.9%)	1 (3.7%)

Algeria
DR Barometer Findings:
Ophthalmologists

There were twenty-three ophthalmologists who answered at least one of the supplementary questions (see Appendix PT 4.1 to 4.14). On average, 24% of patients seen by the ophthalmologists had DR and 13% DME (see Appendix PT 4.1 and PT 4.2).

The most common waiting time for a screening appointment for DED was more than one week but less than one month (31%) with 15% stating between one and two months. The majority (82%) of ophthalmologists reported no wait from time of screening to diagnosis while 7.4% (n=2) reported a wait time of less than one week (see Appendix PT 4.3 and PT 4.4).

Screening

Eighty-eight percent of ophthalmologists personally administer treatment for DR (see Appendix PT 4.6).

The most common factors influencing how ophthalmologists treat patients with DR or DME are: the presence of comorbidities such as hypertension (80%), high glucose levels (70%), and a patient's ability to adhere to recommendations (65%) (see Appendix PT 4.7).

The most common outreach venues for screening for DED were vision centres (35%), health fairs for all (26%), health fairs for people with diabetes (22%), and mobile screening centres (22%) (see Appendix PT 4.13).

Eighty-three percent of ophthalmologists reported that they screen patients for DR based on fundoscopy through dilated pupils. Additionally, 75% use optical coherence tomography, 63% use fluorescein angiography, 46% use fundoscopy through undilated pupils, and 38% use retinal photo.

Sixty-seven percent of ophthalmologists said that they treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and PT 4.9).

Sixty-three percent of ophthalmologists reported that most of their patients present when visual problems have already occurred, 21% (n=5) reported that patients present "in time" for screening, and 17% (n=4) said that patients present too late for effective treatment (see Appendix PT 4.10).

Treatment and Challenges

Forty-eight percent of ophthalmologists had received specific training on the treatment and diagnosis of DR and or DME. Forty-six percent had training five years ago or more, 46% between one and five years ago, and 9.1% within the past year. Ninety-six percent 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 reported that the greatest challenges for improving patient outcomes in DED were late diagnosis (70%), a limited access to patient education on DR and DME (65%), poor multi-disciplinary team integration (57%), as well as reimbursement restrictions on approved therapies and governments inability to cover a patient's costs (48%) (see Table 14 and Appendix PT 4.14).

Challenges for improving patient outcomes in diabetic eye disease (DED)

Question	Response	Ophthalmologist (n=23)
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Late diagnosis	16 (69.6%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	15 (65.2%)
	Multi-disciplinary team integration is poor	13 (56.5%)
	Reimbursement/restrictions on approved therapy	11 (47.8%)
	Government/insurance not able to cover patient costs	11 (47.8%)
	Ineffective screening services	9 (39.1%)
	No universal guidelines on how to treat	4 (17.4%)
	Referral pathways	3 (13.0%)
	No universal guidelines on referral/ screening	3 (13.0%)
	No universal guideline on when to treat	3 (13.0%)
	Current available therapies not effective	2 (8.7%)
	Other	2 (8.7%)

Algeria
DR Barometer Summary

In Algeria, 68 adults with diabetes and 159 health care professionals have provided insight about their experiences of living with, managing and treating diabetes, DR and DME. The results help to understand awareness, management, and services available in Algeria.

Algeria is estimated to be the ninth most populous country in Africa with a population of approximately 40.3 million inhabitants. By 2050, the population distribution in Algeria is expected to increase by ~40%. However, there will be a decrease in the percentage of those 15 years of age and younger (~20%) and a drastic increase of ~289% for those aged 65 years or older. In just over 30 years the population of 65 years or older will reach an all-time high of approximately 9.5 million, about 17% of the total population.

Algeria has over 1.7 million (1,157.6-2,359.5‡) adults living with diabetes, which accounts to ~5% of people living with diabetes in this region. The diabetes national prevalence in Algeria (20 – 79 years) is 6.8% (4.7-9.5‡) and the diabetes age-adjusted comparative prevalence is 7.5% (5.1-10.3‡).

Deaths attributed to diabetes in Algeria, in 2015, were 14,067, which accounts to ~4% of the diabetes related deaths experienced in this region. The estimated number of undiagnosed cases was 693,800 (599.8-1,222.7‡).

Of the respondents in Algeria, 31% had been diagnosed with type 1 diabetes and 65% with type 2 diabetes. Amongst 18 to 39 year-olds, 53% had type 1 and 47% had type 2 diabetes. In the 40-59 age group, 24% had type 1 and 73% had type 2 diabetes. Nineteen percent of 60-79 year-olds had type 1 diabetes and 69% had type 2.

Nineteen percent of respondents (n=13) had been diagnosed with DED and a further 13% (n=9) with DME. In people aged 18-39 years, 26% had DED and 11% had DME, those aged 40-59 years 12% had DED and 15% had DME, and for people aged 60-79 years, 25% had DED and 13% had DME.

The DR Barometer findings indicate an important, and well known, trend noted in the findings that generally the longer the time since diagnoses the greater the likelihood to be diagnosed with DED.

In those diagnosed within the last five years, no one had DED or DME, this increased to 13% had DED, and 63% had DME for those diagnosed 16-20 years ago. Twenty-nine percent of respondents that had been diagnosed 21 years ago or longer had DED and 43% had DME.

People were most often informed about their condition from their health care professionals, such as doctor or nurse. It should be noted though a high reliance on traditional media such as TV, radio, newspaper, magazines and diabetes, or other health, organisations. A trend globally, which was reflected in the Algeria study, was the increasing usage of the internet by over a quarter of respondents (29%).

Many of those surveyed struggled with the management of their diabetic condition citing issues that were within their personal control such as finding the right things to eat and balancing one's health with other life priorities. There were also health care system challenges reported such as difficulty to travel to their regular doctor or specialist and long wait times to schedule an appointment to see their doctor or specialist.

A compilation of difficulties balancing their diabetes with other priorities coupled with difficulties accessing health care services may be a factor in the finding that only 14% of respondents were currently enrolled in a diabetes management programme.

There was not only high awareness of the complications associated with diabetes but vision loss was feared almost three times more than any other complication such as loss of limb, kidney disease and cardiovascular disease or stroke.

There was also an increase in the frequency of people with DED and DME experiencing certain complications compared with those without DED. The frequency of kidney disease increased from 4.3% in those without DED to 29% with DED and 50% with DME. Likewise cardiovascular disease, increased from 13% in people without DED to 14% with DED and 25% with DME.

The relationship between the patient and their health care provider is critical to realistic and optimal patient outcomes. Indeed, health education and information was reported by patients as an important tool to improve the management of one's diabetes yet half of respondents did not receive any information on eye complications from their doctor or nurse.

Likewise, almost half (48%) of all health care professionals reported one of the major barriers to optimising eye health was a lack of knowledge or awareness on behalf of the patient and yet more than a third (36%), including two-thirds (67%) of ophthalmologists, did not have and written information on diabetes and potential eye complications available for their patients.

It is also important to note, one in three (35%) of patients either never discussed eye complications with their health care providers or discussions only took place once symptoms arose. Equally concerning were the myths and perceptions around vision changes and prevention strategies, with almost one in four not making any effort to prevent vision problems and some believing that vision problems were a normal part of ageing.

Knowledge and guidance was not only an issue for patients, as sixty-four percent of all providers, including 47% of ophthalmologists, said that they did not have written protocols or guidelines available in the management of diabetes-related vision issues.

Two-thirds of those diagnosed with DED or DME said that their vision was affected either slightly or significantly, and all of these respondents reported ways in which in vision impairment impacted their health, lifestyle, and life choices. Driving a vehicle, travelling, working or keeping a job, social interactions with their family and friends, and even managing their underlying diabetes were all affected by vision impairment or loss due to DED or DME.

Health, family, and housing needs were the top three 'worries' on the mind of the respondents surveyed.

Sixty-four percent of all those surveyed did not receive assistance from the government while 14% received incomes assistance. There was a variance in those who received government assistance; 28% of those without DED received government assistance compared to 60% of those with DED and 33% of those with DME.

Seventy-six percent of all respondents said they had no trouble paying for food at any time during the past year. However, 36% with DED and 44% with DME reported difficulty with paying for food compared to 12% of those without DED.

A majority (89%) of respondents with DME preferred a proactive treatment approach to prevent further vision loss rather than a reactive treatment once further vision loss has occurred. Over a third of respondents felt that their access to health care was affected by certain factors such as their level of income or place where one lives.

Knowing that diabetes-related vision loss is preventable, addressing barriers to eye screening is an important policy issue. While most respondents had received an eye exam, which is understandable considering the purposeful sample, there remained many barriers, primarily those associated with cost of the eye exam and accessibility of services, such as long wait time to schedule an appointment and distance of exam in relation to one's place of residence.

Supporting this, health care professionals reported the high cost of care, long wait times to schedule an appointment and long wait time on the day of the visit, proximity to care and limited access to eye specialists as major barriers to optimising eye health.

The top characteristics influencing the referral process for eye care providers, including ophthalmologists, were the duration of diabetes, the presence of comorbidities such as hypertension, high glucose levels, and a patient's age.

Ophthalmologists reported that the greatest challenges for improving patient outcomes in DED were high rates of late diagnosis, limited access to patient education on DR and DME, poor multi-disciplinary team integration, as well as reimbursement restrictions on approved therapies and governments inability to cover a patient's costs.

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

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

References and Acknowledgement

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

Appendices

The Diabetic Retinopathy Barometer Survey: Appendices for Algeria

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	96 (100.0%)
Respondents aged 18 or over	95 (99.0%)
Respondents with diabetes	68 (70.8%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	96 (100.0%)
Included in Diabetic Analysis Set	68 (70.8%)
Excluded from Diabetic Analysis Set	28 (29.2%)
Reasons for exclusion from diabetic analysis set	.
Under 18 years of age	1
Not diagnosed with diabetes	14
Missing information on diabetes diagnosis	13

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	68 (100.0%)
World Bank Income Group: Upper-middle income	68 (100.0%)
Persons with diabetic eye disease (DED)	13 (19.1%)
Persons with diabetic macular edema (DME)	9 (13.2%)
Persons with Type I diabetes	21 (30.9%)
Persons with Type II diabetes	44 (64.7%)
Persons not seeing health care professional for diabetes	10 (14.7%)
Persons seeing health care professional for diabetes	53 (77.9%)
Persons with eye disease & not received treatment	9 (13.2%)
Persons with eye disease & received treatment	11 (16.2%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	21 (30.9)
	Type II	44 (64.7)
	Don't know/Not sure	3 (4.4)
	Total Valid Response	68 (100.0)

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	5 (7.9)
	1 - 5 years ago	12 (19.0)
	6 - 10 years ago	18 (28.6)
	11 - 15 years ago	11 (17.5)
	16 - 20 years ago	8 (12.7)
	21 years ago or longer	7 (11.1)
	Don't know/Not sure	2 (3.2)
	Total Valid Response	63 (100.0)
	Total missing	5

Table 2.3.1

Question	Response	Number of Respondents (%)
Do you see a health care professional for your diabetes?	Yes	53 (84.1)
	No	10 (15.9)
	Total Valid Response	63 (100.0)
	Total missing	5
What kind of health care professional?	General/Family Doctor	14 (28.6)
	Nurse	1 (2.0)
	Diabetes Specialist	33 (67.3)
	Other	1 (2.0)

Question	Response	Number of Respondents (%)
	Total Valid Response	49 (100.0)
	Total missing	19

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	11
	Mean	3.3
	SD	0.9
	Median	4.0
	Min	2
	Max	4
	Total missing	3
Nurse	Total valid numeric response (n)	1
	Mean	3.0
	SD	
	Median	3.0
	Min	3
	Max	3
Diabetes Specialist	Total valid numeric response (n)	29
	Mean	3.8
	SD	2.4
	Median	4.0
	Min	1
	Max	15
	Don't know/Not sure	1
	Total missing	3
Other	Total valid numeric response (n)	1
	Mean	4.0
	SD	
	Median	4.0
	Min	4
	Max	4

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	48 (82.8%)
	Health educator	8 (13.8%)
	Nutritionist or dietitian	5 (8.6%)
	Diabetes organization or other health organization	12 (20.7%)
	Family/Friends/Neighbors	15 (25.9%)
	TV/Radio/Newspaper/Magazines	17 (29.3%)
	Internet	17 (29.3%)
	Social media (e.g. Facebook, Twitter, blogs)	9 (15.5%)
	Pharmacist	4 (6.9%)
	None of the above	4 (6.9%)
	Total Valid Response	58 (100.0%)
	Total missing	10

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	37 (63.8%)
	Oral medicine	29 (50.0%)
	Exercise	18 (31.0%)
	Insulin	30 (51.7%)
	Natural/Herbal medicine	2 (3.4%)
	None of the above	2 (3.4%)
	Total Valid Response	58 (100.0%)
	Total missing	10

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	8 (13.6)

Question	Response	Number of Respondents (%)
	No	51 (86.4)
	Total Valid Response	59 (100.0)
	Total missing	9
Who sponsors the programme?	Hospital support program	1 (14.3)
	Pharmaceutical support program	2 (28.6)
	Patient organization support program	4 (57.1)
	Total Valid Response	7 (100.0)
	Total missing	61
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	5 (71.4)
	No	2 (28.6)
	Total Valid Response	7 (100.0)
	Total missing	61

Table 2.7

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctor's office or clinic?		
Blood glucose test	Yes	53 (100.0%)
	Less than 6 months	47 (88.7%)
	6 - 12 months	3 (5.7%)
	Greater than 12 months	1 (1.9%)
	Total valid response	51 (96.2%)
	Total missing	17
	Total valid response	53 (100.0%)
	Total missing	15
Urine check	Yes	45 (86.5%)
	Less than 6 months	29 (55.8%)
	6 - 12 months	9 (17.3%)

Test	Response	Number of Respondents (%)
	Greater than 12 months	6 (11.5%)
	Total valid response	44 (84.6%)
	Total missing	24
	No	6 (11.5%)
	Don't know/Not sure	1 (1.9%)
	Total valid response	52 (100.0%)
	Total missing	16
Weight check	Yes	45 (90.0%)
	Less than 6 months	30 (60.0%)
	6 - 12 months	6 (12.0%)
	Greater than 12 months	6 (12.0%)
	Total valid response	42 (84.0%)
	Total missing	26
	No	5 (10.0%)
	Total valid response	50 (100.0%)
	Total missing	18
Blood pressure check	Yes	50 (98.0%)
	Less than 6 months	40 (78.4%)
	6 - 12 months	6 (11.8%)
	Greater than 12 months	2 (3.9%)
	Total valid response	48 (94.1%)
	Total missing	20
	No	1 (2.0%)
	Total valid response	51 (100.0%)
	Total missing	17
Foot check	Yes	37 (75.5%)
	Less than 6 months	25 (51.0%)
	6 - 12 months	8 (16.3%)
	Greater than 12 months	3 (6.1%)

Test	Response	Number of Respondents (%)
	Total valid response	36 (73.5%)
	Total missing	32
	No	10 (20.4%)
	Don't know/Not sure	2 (4.1%)
	Total valid response	49 (100.0%)
	Total missing	19
Eye check	Yes	47 (94.0%)
	Less than 6 months	21 (42.0%)
	6 - 12 months	15 (30.0%)
	Greater than 12 months	8 (16.0%)
	Total valid response	44 (88.0%)
	Total missing	24
	No	3 (6.0%)
	Total valid response	50 (100.0%)
	Total missing	18

Table 2.8

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	11 (21.6%)
	Well	18 (35.3%)
	Not very well	16 (31.4%)
	Not well at all	5 (9.8%)
	Don't know/Not sure	1 (2.0%)
	Total Valid Response	51 (100.0%)
	Total missing	17

Table 2.9

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	12 (23.1%)
	No insurance	6 (11.5%)
	Travel to my regular doctor or specialist is difficult	12 (23.1%)
	Long wait time for an appointment to see my doctor or specialist	11 (21.2%)
	Health services needed are not available	5 (9.6%)
	Don't know enough about diabetes	8 (15.4%)
	Too hard to eat the right things	31 (59.6%)
	Too many other things to do	14 (26.9%)
	Stigma or discrimination because of diabetes	4 (7.7%)
	Don't want to think about having diabetes	9 (17.3%)
	Other	3 (5.8%)
	Total Valid Response	52 (100.0%)
	Total missing	16

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	39 (75.0%)
	Support groups	7 (13.5%)
	Support from family or friends	30 (57.7%)
	Health education and information	16 (30.8%)
	Mobile services (services that travel to or near your home)	2 (3.8%)
	Coordination of healthcare and services by a professional	8 (15.4%)
	Emergency helpline	3 (5.8%)
	Other	2 (3.8%)
	None	2 (3.8%)

Question	Response	Number of Respondents (%)
	Total Valid Response	52 (100.0%)
	Total missing	16

Table 2.11

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	41 (80.4%)
	Foot ulcers	34 (66.7%)
	Increased risk of broken bones or fractures	5 (9.8%)
	Loss of feeling in hands or toes (neuropathy)	30 (58.8%)
	Vision loss	42 (82.4%)
	Irritable bowel disease	11 (21.6%)
	Kidney disease	39 (76.5%)
	Cardiovascular disease/Stroke	31 (60.8%)
	Other	3 (5.9%)
	None	2 (3.9%)
	Total Valid Response	51 (100.0%)
	Total missing	17

Table 2.12

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	9 (18.0)
	Increased risk of broken bones or fractures	1 (2.0)
	Loss of feeling in hands or toes (neuropathy)	2 (4.0)
	Vision loss	24 (48.0)
	Irritable bowel disease	1 (2.0)
	Kidney disease	6 (12.0)
	Cardiovascular disease/Stroke	6 (12.0)

Question	Response	Number of Respondents (%)
	Don't know/Not sure	1 (2.0)
	Total Valid Response	50 (100.0)
	Total missing	18

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	3 (8.8%)
	Foot ulcers	2 (5.9%)
	Broken bones or fractures	1 (2.9%)
	Loss of feeling in hands or toes (neuropathy)	5 (14.7%)
	Vision loss	18 (52.9%)
	Irritable bowel disease	1 (2.9%)
	Kidney disease	5 (14.7%)
	Cardiovascular disease/Stroke	5 (14.7%)
	Don't know/Not sure	7 (20.6%)
	None	5 (14.7%)
	Total Valid Response	34 (100.0%)
	Total missing	34

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	19 (39.6%)
	Multiple times per year	8 (16.7%)
	Once per year	3 (6.3%)
	Only when symptoms arise	12 (25.0%)
	Never	5 (10.4%)
	Don't know/Not sure	1 (2.1%)

Question	Response	Number of Respondents (%)
	Total Valid Response	48 (100.0%)
	Total missing	20

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	8 (17.0%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	34 (72.3%)
	I do not make any special effort to prevent vision problems	11 (23.4%)
	Total Valid Response	47 (100.0%)
	Total missing	21

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	40 (83.3)
	Public - Private	2 (4.2)
	None	6 (12.5)
	Total Valid Response	48 (100.0)
	Total missing	20

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	18 (40.0)
	Insurance pays total cost	2 (4.4)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (2.2)
	Out-of-pocket only (pay	22 (48.9)

Question	Response	Number of Respondents (%)
	cash for all care)	
	Do not use service	2 (4.4)
	Total Valid Response	45 (100.0)
	Total missing	23
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	7 (15.9)
	Insurance pays total cost	2 (4.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	4 (9.1)
	Out-of-pocket only (pay cash for all care)	30 (68.2)
	Do not use service	1 (2.3)
	Total Valid Response	44 (100.0)
	Total missing	24
Medicines	Care is free	17 (39.5)
	Insurance pays total cost	17 (39.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	4 (9.3)
	Out-of-pocket only (pay cash for all care)	4 (9.3)
	Do not use service	1 (2.3)
	Total Valid Response	43 (100.0)
	Total missing	25
Medical supplies (e.g. blood glucose meter/strips)	Care is free	19 (44.2)
	Insurance pays total cost	10 (23.3)
	Insurance and out-of-pocket/cash (e.g. co-pays)	6 (14.0)
	Out-of-pocket only (pay cash for all care)	6 (14.0)
	Do not use service	1 (2.3)
	Don't know/Not Sure	1 (2.3)
	Total Valid Response	43 (100.0)
	Total missing	25
Procedures	Care is free	12 (30.0)

Question	Response	Number of Respondents (%)
	Insurance pays total cost	6 (15.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (2.5)
	Out-of-pocket only (pay cash for all care)	11 (27.5)
	Do not use service	5 (12.5)
	Don't know/Not Sure	5 (12.5)
	Total Valid Response	40 (100.0)
	Total missing	28
Tests/screenings	Care is free	11 (26.8)
	Insurance pays total cost	4 (9.8)
	Insurance and out-of-pocket/cash (e.g. co-pays)	5 (12.2)
	Out-of-pocket only (pay cash for all care)	18 (43.9)
	Do not use service	1 (2.4)
	Don't know/Not Sure	2 (4.9)
	Total Valid Response	41 (100.0)
	Total missing	27
Health education	Care is free	18 (47.4)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (2.6)
	Out-of-pocket only (pay cash for all care)	5 (13.2)
	Do not use service	13 (34.2)
	Don't know/Not Sure	1 (2.6)
	Total Valid Response	38 (100.0)
	Total missing	30
Counseling	Care is free	7 (21.9)
	Insurance and out-of-pocket/cash (e.g. co-pays)	2 (6.3)
	Out-of-pocket only (pay cash for all care)	3 (9.4)
	Do not use service	12 (37.5)
	Don't know/Not Sure	8 (25.0)

Question	Response	Number of Respondents (%)
	Total Valid Response	32 (100.0)
	Total missing	36

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	8 (16.7%)
	No	40 (83.3%)
	Total valid response	48 (100.0%)
	Total missing	20

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	45 (86.5%)
	No	7 (13.5%)
	Total valid response	52 (100.0%)
	Total missing	16
How long ago was your last eye exam?	Within the last year	35 (83.3%)
	More than 1 year ago but less than 2 years	4 (9.5%)
	More than 2 years ago but less than 3 years	2 (4.8%)
	Five or more years ago	1 (2.4%)
	Total valid response	42 (100.0%)
	Total missing	26
Who did the last exam?	General/Family practitioner	2 (4.9%)
	Eye doctor/Eye clinic	39 (95.1%)
	Total valid response	41 (100.0%)
	Total missing	27

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	39 (83.0%)
	No	8 (17.0%)
	Total valid response	47 (100.0%)
	Total missing	21

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	39 (83.0%)
	Every two years	1 (2.1%)
	Less often than every two years	1 (2.1%)
	Only when symptoms occur	2 (4.3%)
	Never	1 (2.1%)
	Don't know/Not sure	3 (6.4%)
	Total valid response	47 (100.0%)
	Total missing	21

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	They are expensive	27 (57.4%)
	Eye exams are not available near my home	12 (25.5%)
	Long wait time for appointment	16 (34.0%)
	Long wait time on the day of the visit	25 (53.2%)
	Referral process is complicated or takes too long	2 (4.3%)
	Recommended treatments for eye problems are not available	4 (8.5%)
	Don't know much about my condition	1 (2.1%)

Question	Response	Number of Respondents (%)
	Fear of treatment/results	1 (2.1%)
	Burden on my family/friends	6 (12.8%)
	Limited access to diabetes specialists	4 (8.5%)
	I'm not likely to have eye complications	4 (8.5%)
	Eye exams are not important	1 (2.1%)
	Too many other things to do or worry about	8 (17.0%)
	Clinics are too small or lack necessary equipment/staff	3 (6.4%)
	Other	8 (17.0%)
	Total valid response	47 (100.0%)
	Total missing	21

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	21 (42.0%)
	No	29 (58.0%)
	Total valid response	50 (100.0%)
	Total missing	18
Has your diabetic eye disease affected your vision?	Yes, slightly	5 (23.8%)
	Yes, significantly	11 (52.4%)
	No	5 (23.8%)
	Total valid response	21 (100.0%)
	Total missing	47
Have vision issues caused you to have difficulty with any of the following?	Traveling	6 (40.0%)
	Household responsibilities, such as cooking or cleaning	3 (20.0%)
	Social interactions with family/friends	4 (26.7%)
	Leisure activities/exercise	4 (26.7%)
	Work or keeping a job	6 (40.0%)

Question	Response	Number of Respondents (%)
	Managing my diabetes	4 (26.7%)
	Driving (a car/vehicle)	8 (53.3%)
	Total valid response	15 (100.0%)
	Total missing	53

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	11 (52.4%)
	No	9 (42.9%)
	Don't know/Not sure	1 (4.8%)
	Total valid response	21 (100.0%)
	Total missing	47
What treatment did you receive?	Laser	10 (90.9%)
	Injection in the eye (Anti-VEGF)	3 (27.3%)
	Surgery	2 (18.2%)
	Other	1 (9.1%)
	Total valid response	11 (100.0%)
	Total missing	57
Did you complete the treatment?	Yes	5 (45.5%)
	No	2 (18.2%)
	Still receiving treatment	2 (18.2%)
	Don't know/Not sure	2 (18.2%)
	Total valid response	11 (100.0%)
	Total missing	57
Do you feel that the treatment worked?	Yes, and vision improved	2 (25.0%)
	Yes, but vision stayed the same	2 (25.0%)
	No	1 (12.5%)
	Still waiting to know	2 (25.0%)
	Don't know/Not sure	1 (12.5%)
	Total valid response	8 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	60
What is/are the reason(s) that you did not complete the treatment?	Treatment was too expensive	1 (50.0%)
	I was fearful (scared) of treatment	1 (50.0%)
	Other	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	66
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	6 (75.0%)
	Treatment is not accessible	1 (12.5%)
	Too expensive	1 (12.5%)
	No insurance	1 (12.5%)
	I'm fearful of treatment	1 (12.5%)
	Total valid response	8 (100.0%)
	Total missing	60

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	9 (19.1%)
	No	33 (70.2%)
	Don't know/Not sure	5 (10.6%)
	Total valid response	47 (100.0%)
	Total missing	21
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	8 (88.9%)
	Don't know/Not sure	1 (11.1%)
	Total valid response	9 (100.0%)
	Total missing	59

Table 3.9

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
Have you received information about diabetic retinopathy or diabetic macular edema from any of the following sources?	Doctor/Nurse	26 (56.5%)
	Health educator	5 (10.9%)
	Diabetes organization or other health organization	4 (8.7%)
	Family/Friends/Neighbors	5 (10.9%)
	TV/Radio/Newspaper/Magazines	4 (8.7%)
	Internet	6 (13.0%)
	None of the above	11 (23.9%)
	Total valid response	46 (100.0%)
	Total missing	22

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	18 (38.3)
	Male	29 (61.7)
	Total Valid Response	47 (100.0)
	Total missing	21
Please indicate your age	18 - 29	9 (13.2)
	30 - 39	10 (14.7)
	40 - 49	17 (25.0)
	50 - 59	16 (23.5)
	60 - 69	12 (17.6)
	70 - 79	4 (5.9)
	Total Valid Response	68 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	41 (87.2)
	Non-urban setting	6 (12.8)
	Total Valid Response	47 (100.0)
	Total missing	21

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Did not complete primary school	3 (6.5)
	Primary school	2 (4.3)
	Secondary school	10 (21.7)
	College/University	26 (56.5)
	Graduate or post-graduate	5 (10.9)
	Total valid response	46 (100.0)
	Total missing	22

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	23 (50.0)
	Working without pay at home (e.g. housework, farming)	1 (2.2)
	Volunteering	1 (2.2)
	Retired	6 (13.0)
	Student	2 (4.3)
	Not working	13 (28.3)
	Total Valid Response	46 (100.0)
	Total missing	22

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	6 (13.6%)
	Medical assistance	5 (11.4%)
	Pension assistance	6 (13.6%)
	None of the above	28 (63.6%)
	Total valid response	44 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	24

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	11 (24.4)
	No	34 (75.6)
	Total Valid Response	45 (100.0)
	Total missing	23

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	3 (7.0)
	Education	1 (2.3)
	Gender	1 (2.3)
	Income	9 (20.9)
	Language you speak	1 (2.3)
	Place of birth	1 (2.3)
	Place where you live	7 (16.3)
	Tribal affiliation	1 (2.3)
	None of the above	27 (62.8)
	Total valid response	43 (100.0)
	Total missing	25

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about	Food	3 (6.5)

Question	Response	Number of Respondents (%)
most?		
	Housing	4 (8.7)
	Money	3 (6.5)
	Health	28 (60.9)
	Family	5 (10.9)
	None of the above	3 (6.5)
	Total Valid Response	46 (100.0)
	Total missing	22

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Excellent	2 (4.3%)
	Very good	3 (6.5%)
	Good	19 (41.3%)
	Total good health	24 (52.2%)
	Fair	18 (39.1%)
	Poor	4 (8.7%)
	Fair or poor health	22 (47.8%)
	Total valid response	46 (100.0%)
	Total missing	22

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	14 (48.3%)
	1-5 unhealthy days	2 (6.9%)
	6-10 unhealthy days	5 (17.2%)
	11-20 unhealthy days	2 (6.9%)
	21-30 unhealthy days	5 (17.2%)

Question	Response	Number of Respondents (%)
	No unhealthy days	15 (51.7%)
	Total valid response	29 (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	12 (42.9%)
	1-5 unhealthy days	2 (7.1%)
	6-10 unhealthy days	3 (10.7%)
	11-20 unhealthy days	5 (17.9%)
	21-30 unhealthy days	2 (7.1%)
	No unhealthy days	16 (57.1%)
	Total valid response	28 (100.0%)
	Total missing	40

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	19 (70.4%)
	1-5 unhealthy days	2 (7.4%)
	6-10 unhealthy days	5 (18.5%)
	11-20 unhealthy days	4 (14.8%)
	21-30 unhealthy days	8 (29.6%)
	No unhealthy days	8 (29.6%)

Question	Response	Number of Respondents (%)
	Total valid response	27 (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	15 (53.6%)
	1-5 unhealthy days	1 (3.6%)
	6-10 unhealthy days	7 (25.0%)
	11-20 unhealthy days	5 (17.9%)
	21-30 unhealthy days	2 (7.1%)
	No unhealthy days	13 (46.4%)
	Total valid response	28 (100.0%)
	Total missing	40

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	19 (45.2%)
	No	23 (54.8%)
	Total valid response	42 (100.0%)
	Total missing	26
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Yes	5 (38.5%)
	No	8 (61.5%)
	Total valid	13 (100.0%)

Question	Response	Number of Respondents (%)
	response	
	Total missing	55
b) Back or neck problem	Yes	6 (46.2%)
	No	6 (46.2%)
	Don't know/Not sure	1 (7.7%)
	Total valid response	13 (100.0%)
	Total missing	55
c) Fractures, bone/joint injury	Yes	1 (7.7%)
	No	12 (92.3%)
	Total valid response	13 (100.0%)
	Total missing	55
d) Walking problem	Yes	2 (15.4%)
	No	11 (84.6%)
	Total valid response	13 (100.0%)
	Total missing	55
e) Lung/breathing problem	Yes	4 (26.7%)
	No	11 (73.3%)
	Total valid response	15 (100.0%)
	Total missing	53
f) Hearing problem	Yes	1 (8.3%)
	No	11 (91.7%)
	Total valid response	12 (100.0%)
	Total missing	56
g) Eye/vision problem	Yes	11 (68.8%)
	No	5 (31.3%)
	Total valid response	16 (100.0%)
	Total missing	52
h) Heart problem	Yes	2 (15.4%)

Question	Response	Number of Respondents (%)
	No	10 (76.9%)
	Don't know/Not sure	1 (7.7%)
	Total valid response	13 (100.0%)
	Total missing	55
i) Stroke problem	No	13 (100.0%)
	Total valid response	13 (100.0%)
	Total missing	55
j) Hypertension/high blood pressure	Yes	4 (28.6%)
	No	10 (71.4%)
	Total valid response	14 (100.0%)
	Total missing	54
k) Diabetes	Yes	16 (88.9%)
	No	2 (11.1%)
	Total valid response	18 (100.0%)
	Total missing	50
l) Cancer	No	13 (100.0%)
	Total valid response	13 (100.0%)
	Total missing	55
m) Mental or emotional health	Yes	5 (33.3%)
	No	9 (60.0%)
	Don't know/Not sure	1 (6.7%)
	Total valid response	15 (100.0%)
	Total missing	53

PT 1.2

Analysis Sets	Number of Respondents (%)

Analysis Sets	Number of Respondents (%)
All valid respondents	159 (100.0%)
Included in Provider Analysis Set (PAS)	159 (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	159
Included in the Eye Care Professional Set (Eye Specialist)	45 (28.3%)
Excluded in the Eye Care Professional Set (Eye Specialist)	114 (71.7%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	114
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	159 (100.0%)
Primary Care Provider	37 (23.3%)
Diabetes Specialist Provider	67 (42.1%)
Eye Care Professional	45 (28.3%)
Ophthalmologist	44 (27.7%)

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

PT 1.4

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your specialty?	General primary care/Family practitioner	37 (100.0%)	8 (11.9%)	0 (0.0%)	45 (28.3%)
	Diabetes specialist	0 (0.0%)	67 (100.0%)	3 (6.8%)	70 (44.0%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	37 (84.1%)	37 (23.3%)
	Optometrist	0 (0.0%)	0 (0.0%)	1 (2.3%)	2 (1.3%)

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Retinal specialist	0 (0.0%)	0 (0.0%)	12 (27.3%)	12 (7.5%)
	Nurse	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Health educator	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (1.9%)
	None of the above	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (4.4%)
	Total valid response	37 (100.0%)	67 (100.0%)	44 (100.0%)	159 (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)	37	67	44	159
	Mean	23.1	17.5	17.5	18.8
	SD	12.5	10.3	9.1	10.8
	Median	25.0	17.0	19.0	20.0
	Min.	0	0	0	0
	Max.	80	54	35	80
	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	12 (33.3%)	25 (40.3%)	0 (0.0%)	39 (26.0%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	18 (42.9%)	19 (12.7%)
	General medical clinic/practice	18 (50.0%)	8 (12.9%)	1 (2.4%)	27 (18.0%)
	Hospital	0 (0.0%)	21 (33.9%)	22 (52.4%)	47 (31.3%)
	Other	6 (16.7%)	8 (12.9%)	1 (2.4%)	18

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
					(12.0%)
	Total Valid Response	36 (100.0%)	62 (100.0%)	42 (100.0%)	150 (100.0%)
	Total missing	1	5	2	9

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	34 (97.1%)	60 (98.4%)	41 (100.0%)	145 (98.0%)
	Non-urban setting	1 (2.9%)	1 (1.6%)	0 (0.0%)	3 (2.0%)
	Total Valid Response	35 (100.0%)	61 (100.0%)	41 (100.0%)	148 (100.0%)
	Total missing	2	6	3	11

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	19 (54.3%)	29 (47.5%)	20 (48.8%)	74 (50.3%)
	Private	14 (40.0%)	25 (41.0%)	14 (34.1%)	54 (36.7%)
	Non profit	0 (0.0%)	4 (6.6%)	0 (0.0%)	4 (2.7%)
	Combined/mixed	2 (5.7%)	3 (4.9%)	7 (17.1%)	15 (10.2%)
	Total Valid Response	35 (100.0%)	61 (100.0%)	41 (100.0%)	147 (100.0%)
	Total missing	2	6	3	12

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	29 (85.3%)	57 (91.9%)	40 (95.2%)	136 (91.3%)
	Yes, limited by age	3 (8.8%)	3 (4.8%)	0 (0.0%)	6 (4.0%)
	Yes, limited by gender	1 (2.9%)	0 (0.0%)	0 (0.0%)	1 (0.7%)
	Yes, limited to persons in the military or veterans	1 (2.9%)	1 (1.6%)	1 (2.4%)	3 (2.0%)
	Yes, limited to persons with health insurance	1 (2.9%)	1 (1.6%)	1 (2.4%)	3 (2.0%)
	Yes, limited to low income or uninsured persons	1 (2.9%)	0 (0.0%)	0 (0.0%)	1 (0.7%)
	Yes, limited to persons who pay out-of-pocket	1 (2.9%)	0 (0.0%)	1 (2.4%)	2 (1.3%)
	Yes, other	2 (5.9%)	0 (0.0%)	0 (0.0%)	3 (2.0%)
	Total valid response	34 (100.0%)	62 (100.0%)	42 (100.0%)	149 (100.0%)
	Total missing	3	5	2	10

PT 2.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the average wait time for an appointment in your main practice?	Less than 1 week	8 (30.8%)	17 (30.9%)	6 (17.6%)	35 (27.8%)
	More than 1 week but less than 1 month	5 (19.2%)	15 (27.3%)	6 (17.6%)	30 (23.8%)
	More than 1 month but less	1 (3.8%)	6 (10.9%)	9 (26.5%)	17 (13.5%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	than 2 months				
	More than 2 months but less than 3 months	2 (7.7%)	6 (10.9%)	6 (17.6%)	15 (11.9%)
	More than 3 months but less than 6 months	1 (3.8%)	3 (5.5%)	4 (11.8%)	8 (6.3%)
	Do not take appointments	7 (26.9%)	7 (12.7%)	3 (8.8%)	17 (13.5%)
	Other	2 (7.7%)	0 (0.0%)	0 (0.0%)	2 (1.6%)
	Don't know/Not sure	0 (0.0%)	1 (1.8%)	0 (0.0%)	2 (1.6%)
	Total Valid Response	26 (100.0%)	55 (100.0%)	34 (100.0%)	126 (100.0%)
	Total missing	11	12	10	33

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)	24	53	33	120
	Mean	100.6	86.4	71.4	82.3
	SD	53.9	50.4	39.4	49.3
	Median	100	80	60	75
	Min.	25	13	15	13
	Max.	250	240	200	250
	Total missing	13	14	11	39
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	23	52	30	115
	Mean	63.2	73.8	25	56.4
	SD	37.2	19.2	17.5	32.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Median	80	80	20	65
	Min.	10	20	7	5
	Max.	100	100	70	100
	Total missing	14	15	14	44

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	15 (60.0%)	31 (57.4%)	17 (50.0%)	70 (56.5%)
	Pay a reduced/subsidized rate	1 (4.0%)	4 (7.4%)	4 (11.8%)	10 (8.1%)
	Pay out-of-pocket (full fees)	9 (36.0%)	19 (35.2%)	13 (38.2%)	43 (34.7%)
	Pay through insurance	4 (16.0%)	4 (7.4%)	2 (5.9%)	10 (8.1%)
	Patient pays some, insurance pays some	3 (12.0%)	0 (0.0%)	1 (2.9%)	4 (3.2%)
	Other	0 (0.0%)	0 (0.0%)	2 (5.9%)	3 (2.4%)
	Total valid response	25 (100.0%)	54 (100.0%)	34 (100.0%)	124 (100.0%)
	Total missing	12	13	10	35

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	2 (7.4%)	10 (18.2%)	8 (23.5%)	22 (17.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	No	25 (92.6%)	45 (81.8%)	26 (76.5%)	105 (82.7%)
	Total valid response	27 (100.0%)	55 (100.0%)	34 (100.0%)	127 (100.0%)
	Total missing	10	12	10	32
In which other practice setting(s) do you work?	Hospital		3 (30.0%)	1 (14.3%)	4 (19.0%)
	Diabetes clinic/practice	1 (50.0%)	2 (20.0%)		4 (19.0%)
	Eye clinic/practice			4 (57.1%)	4 (19.0%)
	Other	1 (50.0%)	5 (50.0%)	3 (42.9%)	10 (47.6%)
	Total valid response	2 (100.0%)	10 (100.0%)	7 (100.0%)	21 (100.0%)
	Total missing	35	57	37	138
In which sector(s) is(are) the practice(s)?	Government	1 (50.0%)	7 (70.0%)	2 (28.6%)	11 (52.4%)
	Private	1 (50.0%)	2 (20.0%)	2 (28.6%)	5 (23.8%)
	Non profit		1 (10.0%)	1 (14.3%)	3 (14.3%)
	Combined/mixed			2 (28.6%)	2 (9.5%)
	Total valid response	2 (100.0%)	10 (100.0%)	7 (100.0%)	21 (100.0%)
	Total missing	35	57	37	138
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes	2 (100.0%)	2 (20.0%)	3 (42.9%)	9 (42.9%)
	No		8 (80.0%)	4 (57.1%)	12 (57.1%)
	Total valid response	2 (100.0%)	10 (100.0%)	7 (100.0%)	21 (100.0%)
	Total missing	35	57	37	138

PT 2.9

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes		22 (100.0%)	48 (88.9%)	21 (84.0%)	101 (91.0%)
		Total valid numeric response (n)	21 (95.5%)	44 (81.5%)	18 (72.0%)	93 (83.8%)
		Mean	33.8	52.9	29.1	38.9
		SD	83.0	108.1	84.7	92.3
		Median	4.0	4.0	4.0	4.0
		Min	2	0	0	0
		Max	365	365	365	365
		Total missing	16	23	26	66
	No			6 (11.1%)	4 (16.0%)	10 (9.0%)
	Total valid response		22 (100.0%)	54 (100.0%)	25 (100.0%)	111 (100.0%)
	Total missing		15	13	19	48
HbA1c	Yes		19 (86.4%)	53 (98.1%)	26 (83.9%)	108 (92.3%)
		Total valid numeric response (n)	19 (86.4%)	50 (92.6%)	24 (77.4%)	103 (88.0%)
		Mean	3.8	7.5	3.3	5.4
		SD	0.5	27.8	0.9	19.4
		Median	4.0	4.0	4.0	4.0
		Min	2	2	2	0
		Max	4	200	4	200
		Total missing	18	17	20	56
	No		3 (13.6%)	1 (1.9%)	5 (16.1%)	9 (7.7%)
	Total valid response		22 (100.0%)	54 (100.0%)	31 (100.0%)	117 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing		15	13	13	42
Urine check	Yes		19 (95.0%)	52 (96.3%)	13 (68.4%)	94 (91.3%)
		Total valid numeric response (n)	19 (95.0%)	49 (90.7%)	11 (57.9%)	89 (86.4%)
		Mean	23.4	7.5	5.5	10.1
		SD	82.8	28.5	5.7	43.6
		Median	4.0	2.0	4.0	4.0
		Min	2	0	1	0
		Max	365	200	20	365
		Total missing	18	18	33	70
	No		1 (5.0%)	2 (3.7%)	6 (31.6%)	9 (8.7%)
	Total valid response		20 (100.0%)	54 (100.0%)	19 (100.0%)	103 (100.0%)
	Total missing		17	13	25	56
Weight check	Yes		22 (100.0%)	52 (94.5%)	7 (41.2%)	91 (87.5%)
		Total valid numeric response (n)	22 (100.0%)	49 (89.1%)	6 (35.3%)	87 (83.7%)
		Mean	21.0	6.9	1.8	9.7
		SD	76.9	20.9	1.8	41.6
		Median	4.0	4.0	1.5	4.0
		Min	0	0	0	0
		Max	365	150	4	365
		Total missing	15	18	38	72
	No			3 (5.5%)	10 (58.8%)	13 (12.5%)
	Total valid response		22 (100.0%)	55 (100.0%)	17 (100.0%)	104 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing		15	12	27	55
Blood pressure check	Yes		21 (100.0%)	54 (98.2%)	19 (86.4%)	104 (96.3%)
		Total valid numeric response (n)	21 (100.0%)	50 (90.9%)	16 (72.7%)	97 (89.8%)
		Mean	25.0	10.3	7.0	12.4
		SD	78.3	28.3	11.8	41.9
		Median	4.0	4.0	4.0	4.0
		Min	4	0	1	0
		Max	365	200	50	365
		Total missing	16	17	28	62
	No			1 (1.8%)	3 (13.6%)	4 (3.7%)
	Total valid response		21 (100.0%)	55 (100.0%)	22 (100.0%)	108 (100.0%)
	Total missing		16	12	22	51
Foot check	Yes		20 (90.9%)	54 (98.2%)	4 (23.5%)	88 (84.6%)
		Total valid numeric response (n)	20 (90.9%)	51 (92.7%)	4 (23.5%)	85 (81.7%)
		Mean	22.7	5.5	2.0	9.1
		SD	80.6	13.6	1.6	40.5
		Median	4.0	4.0	2.0	4.0
		Min	2	0	0	0
		Max	365	100	4	365
		Total missing	17	16	40	74
	No		2 (9.1%)	1 (1.8%)	13 (76.5%)	16 (15.4%)
	Total valid response		22 (100.0%)	55 (100.0%)	17 (100.0%)	104 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing		15	12	27	55
Eye examination - Un-dilated	Yes		10 (45.5%)	20 (43.5%)	29 (96.7%)	66 (61.1%)
		Total valid numeric response (n)	10 (45.5%)	17 (37.0%)	27 (90.0%)	61 (56.5%)
		Mean	37.6	1.5	3.0	8.1
		SD	115.0	1.3	3.0	46.5
		Median	1.0	1.0	2.0	1.0
		Min	0	0	0	0
		Max	365	4	10	365
		Total missing	27	50	17	98
	No		12 (54.5%)	26 (56.5%)	1 (3.3%)	42 (38.9%)
	Total valid response		22 (100.0%)	46 (100.0%)	30 (100.0%)	108 (100.0%)
	Total missing		15	21	14	51
Eye examination - Optical Coherence Tomography	Yes		2 (10.0%)	2 (4.5%)	33 (100.0%)	39 (36.4%)
		Total valid numeric response (n)	2 (10.0%)	2 (4.5%)	31 (93.9%)	37 (34.6%)
		Mean	0.5	1.0	1.9	1.7
		SD	0.7	0.0	1.4	1.4
		Median	0.5	1.0	2.0	1.0
		Min	0	1	0	0
		Max	1	1	5	5
		Total missing	35	65	13	122
	No		18	42 (95.5%)		68

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
			(90.0%)			(63.6%)
	Total valid response		20 (100.0%)	44 (100.0%)	33 (100.0%)	107 (100.0%)
	Total missing		17	23	11	52
Eye examination - Fundoscopy	Yes		11 (52.4%)	35 (68.6%)	33 (100.0%)	85 (73.9%)
		Total valid numeric response (n)	11 (52.4%)	34 (66.7%)	31 (93.9%)	82 (71.3%)
		Mean	0.8	3.9	2.4	2.7
		SD	0.4	17.0	2.0	11.0
		Median	1.0	1.0	2.0	1.0
		Min	0	0	0	0
		Max	1	100	10	100
		Total missing	26	33	13	77
	No		10 (47.6%)	16 (31.4%)		30 (26.1%)
	Total valid response		21 (100.0%)	51 (100.0%)	33 (100.0%)	115 (100.0%)
	Total missing		16	16	11	44
Eye examination - Fluorescein Angiography	Yes		5 (23.8%)	18 (37.5%)	28 (93.3%)	54 (50.0%)
		Total valid numeric response (n)	5 (23.8%)	18 (37.5%)	26 (86.7%)	52 (48.1%)
		Mean	0.8	0.8	2.3	1.6
		SD	0.4	0.4	4.1	3.0
		Median	1.0	1.0	1.0	1.0
		Min	0	0	0	0
		Max	1	1	21	21

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing	32	49	18	107
	No		16 (76.2%)	30 (62.5%)	2 (6.7%)	54 (50.0%)
	Total valid response		21 (100.0%)	48 (100.0%)	30 (100.0%)	108 (100.0%)
	Total missing		16	19	14	51
Eye examination - Lipid check	Yes		14 (66.7%)	42 (84.0%)	16 (64.0%)	77 (73.3%)
		Total valid numeric response (n)	14 (66.7%)	40 (80.0%)	15 (60.0%)	74 (70.5%)
		Mean	28.4	3.0	1.7	7.5
		SD	96.9	6.1	1.3	42.4
		Median	3.0	2.0	2.0	2.0
		Min	1	0	0	0
		Max	365	40	4	365
		Total missing	23	27	29	85
	No		7 (33.3%)	8 (16.0%)	9 (36.0%)	28 (26.7%)
	Total valid response		21 (100.0%)	50 (100.0%)	25 (100.0%)	105 (100.0%)
	Total missing		16	17	19	54

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	Diabetes management and monitoring	19 (90.5%)	46 (95.8%)	11 (36.7%)	86 (78.2%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
who has diabetes?					
	Diet/nutrition	17 (81.0%)	44 (91.7%)	7 (23.3%)	77 (70.0%)
	Exercise/physical activity	16 (76.2%)	42 (87.5%)	8 (26.7%)	75 (68.2%)
	Medicines	19 (90.5%)	47 (97.9%)	10 (33.3%)	86 (78.2%)
	Foot care and inspection	16 (76.2%)	46 (95.8%)	1 (3.3%)	73 (66.4%)
	Blood pressure	18 (85.7%)	48 (100.0%)	8 (26.7%)	84 (76.4%)
	Eye care and exams	6 (28.6%)	22 (45.8%)	27 (90.0%)	61 (55.5%)
	Lipid check	16 (76.2%)	40 (83.3%)	7 (23.3%)	72 (65.5%)
	Other	0 (0.0%)	3 (6.3%)	0 (0.0%)	3 (2.7%)
	None of the above	1 (4.8%)	0 (0.0%)	2 (6.7%)	4 (3.6%)
	Total valid response	21 (100.0%)	48 (100.0%)	30 (100.0%)	110 (100.0%)
	Total missing	16	19	14	49

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	12 (57.1%)	11 (23.4%)	4 (13.3%)	29 (26.6%)
	Yes, but information on eye complications is not sufficient	1 (4.8%)	10 (21.3%)	2 (6.7%)	13 (11.9%)
	Yes, but no information on eye complications is included	2 (9.5%)	14 (29.8%)	1 (3.3%)	21 (19.3%)
	No written	6 (28.6%)	9 (19.1%)	20 (66.7%)	39

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	information is available for patients				(35.8%)
	Don't know/Not sure	0 (0.0%)	3 (6.4%)	3 (10.0%)	7 (6.4%)
	Total Valid Response	21 (100.0%)	47 (100.0%)	30 (100.0%)	109 (100.0%)
	Total missing	16	20	14	50

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	12 (57.1%)	21 (45.7%)	9 (30.0%)	46 (42.6%)
	Yes, available but not used by staff	1 (4.8%)	4 (8.7%)	2 (6.7%)	9 (8.3%)
	Not available	7 (33.3%)	19 (41.3%)	17 (56.7%)	47 (43.5%)
	Don't know/Not sure	1 (4.8%)	2 (4.3%)	2 (6.7%)	6 (5.6%)
	Total Valid Response	21 (100.0%)	46 (100.0%)	30 (100.0%)	108 (100.0%)
	Total missing	16	21	14	51

PT 2.13

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines for detection and management	Yes, available and used	5 (23.8%)	8 (17.0%)	13 (43.3%)	28 (25.7%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
of diabetes-related vision issue available in your main practice?	by staff				
	Yes, available but not used by staff	0 (0.0%)	2 (4.3%)	1 (3.3%)	4 (3.7%)
	Not available	15 (71.4%)	35 (74.5%)	14 (46.7%)	70 (64.2%)
	Don't know/Not sure	1 (4.8%)	2 (4.3%)	2 (6.7%)	7 (6.4%)
	Total Valid Response	21 (100.0%)	47 (100.0%)	30 (100.0%)	109 (100.0%)
	Total missing	16	20	14	50

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)	8 (38.1%)	18 (40.9%)	5 (17.2%)	32 (30.5%)
	Mean	4.8	4.9	7.0	5.2
	SD	0.5	2.1	2.7	2.0
	Median	5.0	5.0	5.0	5.0
	Min	4	2	5	2
	Max	5	10	10	10
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	1 (3.4%)	1 (1.0%)
	Mean			10.0	10.0

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	SD				
	Median			10.0	10.0
	Min			10	10
	Max			10	10
	As soon as they are diagnosed	10 (47.6%)	18 (40.9%)	16 (55.2%)	49 (46.7%)
	When a patient reports eye/vision problems	2 (9.5%)			3 (2.9%)
	No standard practice, timing varies case by case	1 (4.8%)	7 (15.9%)	6 (20.7%)	18 (17.1%)
	Other		1 (2.3%)	1 (3.4%)	2 (1.9%)
	Total valid response	21 (100.0%)	44 (100.0%)	29 (100.0%)	105 (100.0%)
	Total missing	16	23	15	54
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type II?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	3 (6.4%)	0 (0.0%)	3 (2.8%)
	Mean		3.7		3.7
	SD		2.3		2.3
	Median		5.0		5.0
	Min		1		1
	Max		5		5
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.9%)
	Mean				40.0
	SD				
	Median				40.0
	Min				40
	Max				40

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	As soon as they are diagnosed	16 (80.0%)	39 (83.0%)	26 (89.7%)	88 (82.2%)
	When a patient reports eye/vision problems	1 (5.0%)		1 (3.4%)	3 (2.8%)
	No standard practice, timing varies case by case	3 (15.0%)	4 (8.5%)	1 (3.4%)	10 (9.3%)
	Other		1 (2.1%)	1 (3.4%)	2 (1.9%)
	Total valid response	20 (100.0%)	47 (100.0%)	29 (100.0%)	107 (100.0%)
	Total missing	17	20	15	52

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	20 (95.2%)	42 (91.3%)	27 (96.4%)	100 (94.3%)
	Every two years	0 (0.0%)	1 (2.2%)	0 (0.0%)	1 (0.9%)
	More than every two years	1 (4.8%)	1 (2.2%)	0 (0.0%)	2 (1.9%)
	Only when symptoms are present	0 (0.0%)	1 (2.2%)	0 (0.0%)	1 (0.9%)
	Other	0 (0.0%)	1 (2.2%)	1 (3.6%)	2 (1.9%)
	Total Valid Response	21 (100.0%)	46 (100.0%)	28 (100.0%)	106 (100.0%)
	Total missing	16	21	16	53

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes	13 (59.1%)	44 (95.7%)	28 (96.6%)	94 (87.0%)
	No	9 (40.9%)	2 (4.3%)	1 (3.4%)	14 (13.0%)
	Total valid response	22 (100.0%)	46 (100.0%)	29 (100.0%)	108 (100.0%)
	Total missing	15	21	15	51
Where do you screen patients?	In clinic	8 (61.5%)	27 (64.3%)	26 (96.3%)	65 (73.0%)
	Outreach		4 (9.5%)	3 (11.1%)	7 (7.9%)
	Other	5 (38.5%)	11 (26.2%)		19 (21.3%)
	Total valid response	13 (100.0%)	42 (100.0%)	27 (100.0%)	89 (100.0%)
	Total missing	24	25	17	70

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	20 (95.2%)	41 (95.3%)	27 (100.0%)	99 (97.1%)
	Patient's age	15 (71.4%)	26 (60.5%)	22 (81.5%)	71 (69.6%)
	Patient's gender	1 (4.8%)	3 (7.0%)	3 (11.1%)	7 (6.9%)
	Presence of comorbidities such as hypertension, etc.	18 (85.7%)	38 (88.4%)	26 (96.3%)	92 (90.2%)
	High glucose levels	13 (61.9%)	34 (79.1%)	23 (85.2%)	80 (78.4%)
	Ability or inability to pay	5 (23.8%)	6 (14.0%)	4 (14.8%)	16 (15.7%)
	Insurance restrictions	5 (23.8%)	5 (11.6%)	2 (7.4%)	14 (13.7%)
	Patient educational	2 (9.5%)	13 (30.2%)	14 (51.9%)	32

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	level				(31.4%)
	Patient adherence to recommendations	6 (28.6%)	16 (37.2%)	16 (59.3%)	45 (44.1%)
	Total valid response	21 (100.0%)	43 (100.0%)	27 (100.0%)	102 (100.0%)
	Total missing	16	24	17	57

PT 2.18

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What are the major barriers to optimizing eye health faced by patients with diabetes in your main practice?	Cost of care	16 (76.2%)	29 (67.4%)	16 (59.3%)	69 (67.6%)
	Proximity to care	8 (38.1%)	19 (44.2%)	11 (40.7%)	42 (41.2%)
	Long wait time for appointment	13 (61.9%)	29 (67.4%)	11 (40.7%)	60 (58.8%)
	Long wait time on the day of visit	9 (42.9%)	18 (41.9%)	14 (51.9%)	46 (45.1%)
	Referral process	1 (4.8%)	3 (7.0%)	3 (11.1%)	8 (7.8%)
	Recommended treatments are not available	3 (14.3%)	10 (23.3%)	5 (18.5%)	21 (20.6%)
	Lack of knowledge and/or awareness	10 (47.6%)	16 (37.2%)	18 (66.7%)	49 (48.0%)
	Patients fear of treatment/results	8 (38.1%)	20 (46.5%)	17 (63.0%)	48 (47.1%)
	Patients they are a burden on family/friends	4 (19.0%)	2 (4.7%)	5 (18.5%)	12 (11.8%)
	Limited access to diabetes specialists	4 (19.0%)	1 (2.3%)	8 (29.6%)	16 (15.7%)
	Limited access to eye specialists	9 (42.9%)	13 (30.2%)	14 (51.9%)	41 (40.2%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Patients feel eye complications are unlikely	4 (19.0%)	9 (20.9%)	9 (33.3%)	25 (24.5%)
	Patients feel eye exams are not important	3 (14.3%)	7 (16.3%)	6 (22.2%)	20 (19.6%)
	Patients have competing responsibilities and priorities	4 (19.0%)	5 (11.6%)	6 (22.2%)	16 (15.7%)
	Clinic too small or lack necessary equipment/staff	6 (28.6%)	10 (23.3%)	6 (22.2%)	28 (27.5%)
	Other	1 (4.8%)	2 (4.7%)	1 (3.7%)	5 (4.9%)
	Total valid response	21 (100.0%)	43 (100.0%)	27 (100.0%)	102 (100.0%)
	Total missing	16	24	17	57

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	4 (20.0%)	14 (32.6%)	10 (38.5%)	35 (35.0%)
	No	15 (75.0%)	25 (58.1%)	13 (50.0%)	56 (56.0%)
	Don't know/Not sure	1 (5.0%)	4 (9.3%)	3 (11.5%)	9 (9.0%)
	Total Valid Response	20 (100.0%)	43 (100.0%)	26 (100.0%)	100 (100.0%)
	Total missing	17	24	18	59

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	14 (70.0%)	34 (79.1%)	22 (84.6%)	80 (80.0%)
	No	4 (20.0%)	8 (18.6%)	4 (15.4%)	16 (16.0%)
	Don't know/Not sure	2 (10.0%)	1 (2.3%)	0 (0.0%)	4 (4.0%)
	Total Valid Response	20 (100.0%)	43 (100.0%)	26 (100.0%)	100 (100.0%)
	Total missing	17	24	18	59

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	18 - 29		1 (2.3%)	1 (3.7%)	2 (2.0%)
	30 - 39	1 (4.8%)	9 (20.9%)	7 (25.9%)	21 (20.6%)
	40 - 49	8 (38.1%)	15 (34.9%)	10 (37.0%)	36 (35.3%)
	50 - 59	11 (52.4%)	15 (34.9%)	6 (22.2%)	35 (34.3%)
	60 - 69	1 (4.8%)	3 (7.0%)	3 (11.1%)	8 (7.8%)
	Total valid response	21 (100.0%)	43 (100.0%)	27 (100.0%)	102 (100.0%)
	Total missing	16	24	17	57
What is your gender?	Female	10 (47.6%)	22 (51.2%)	14 (51.9%)	50 (49.0%)
	Male	11 (52.4%)	21 (48.8%)	13 (48.1%)	52 (51.0%)
	Total valid response	21 (100.0%)	43 (100.0%)	27 (100.0%)	102 (100.0%)
	Total missing	16	24	17	57

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your highest level of education completed?	College/University	13 (61.9%)	16 (39.0%)	4 (14.8%)	38 (38.4%)
	Graduate or advanced degree (e.g. PhD, MD, etc)	8 (38.1%)	25 (61.0%)	23 (85.2%)	61 (61.6%)
	Total valid response	21 (100.0%)	41 (100.0%)	27 (100.0%)	99 (100.0%)
	Total missing	16	26	17	60

PT 4.1

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	25
	Mean	23.6
	SD	15.7
	Median	20.0
	Min	0
	Max	50
	Total missing	19

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	26
	Mean	13.4
	SD	13.1
	Median	10.0
	Min	0
	Max	50
	Total missing	18

PT 4.3

Question	Response	Ophthalmologist

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	Less than 1 week	3 (11.5%)
	More than 1 week but less than 1 month	8 (30.8%)
	More than 1 month but less than 2 months	4 (15.4%)
	More than 2 months but less than 3 months	4 (15.4%)
	More than 3 months but less than 6 months	4 (15.4%)
	Six or more months	1 (3.8%)
	Do not take appointment	2 (7.7%)
	Total Valid Response	26 (100.0%)
	Total missing	18

PT 4.4

Question	Response	Ophthalmologist
From the time a patient is screened, what is the average length of time he/she waits for diagnosis?	Less than 1 week	2 (7.4%)
	More than 1 week but less than 1 month	1 (3.7%)
	Six or more months	1 (3.7%)
	Other	1 (3.7%)
	There is not wait, diagnosis is given when screened	22 (81.5%)
	Total Valid Response	27 (100.0%)
	Total missing	17

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	19 (70.4%)
		Available locally	19 (70.4%)
		Available in practice	19 (70.4%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	27 (100.0%)
		Total missing	17
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	17 (77.3%)
		Mean	2.3
		SD	2.1
		Median	1.0
		Min	1
		Max	8
		Don't know/not sure	4 (18.2%)
		Not applicable	1 (4.5%)
		Total valid response	22 (100.0%)
		Total missing	22
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	17 (94.4%)
		Mean	1.8
		SD	1.8
		Median	1.0
		Min	1
		Max	8
		Don't know/not sure	1 (5.6%)
		Total valid response	18 (100.0%)
		Total missing	26
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	17 (94.4%)
		Mean	1.9
		SD	1.3
		Median	1.0
		Min	1

Type of Treatment	Question	Response/time	Ophthalmologist
		Max	4
		Don't know/not sure	1 (5.6%)
		Total valid response	18 (100.0%)
		Total missing	26
Anti-VEGF therapies	Is the treatment available?	Available within country	19 (70.4%)
		Available locally	17 (63.0%)
		Available in practice	19 (70.4%)
		Not available	1 (3.7%)
		Total valid response	27 (100.0%)
		Total missing	17
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	21 (87.5%)
		Mean	3.3
		SD	3.3
		Median	1.0
		Min	1
		Max	10
		Don't know/not sure	3 (12.5%)
		Total valid response	24 (100.0%)
		Total missing	20
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	19 (95.0%)
		Mean	2.8
		SD	3.2
		Median	1.0
		Min	0
		Max	10
		Don't know/not	1 (5.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		sure	
		Total valid response	20 (100.0%)
		Total missing	24
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	17 (100.0%)
		Mean	3.3
		SD	2.1
		Median	4.0
		Min	1
		Max	8
		Don't know/not sure	
		Total valid response	17 (100.0%)
		Total missing	27
Intravitreal steroid	Is the treatment available?	Available within country	16 (64.0%)
		Available locally	16 (64.0%)
		Available in practice	16 (64.0%)
		Not available	2 (8.0%)
		Total valid response	25 (100.0%)
		Total missing	19
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	16 (80.0%)
		Mean	2.1
		SD	2.1
		Median	1.0
		Min	1
		Max	8
		Don't know/not sure	1 (5.0%)
		Not applicable	3 (15.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	20 (100.0%)
		Total missing	24
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	14 (77.8%)
		Mean	1.6
		SD	1.4
		Median	1.0
		Min	0
		Max	6
		Don't know/not sure	3 (16.7%)
		Not applicable	1 (5.6%)
		Total valid response	18 (100.0%)
		Total missing	26
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	12 (70.6%)
		Mean	4.7
		SD	4.6
		Median	4.0
		Min	1
		Max	16
		Don't know/not sure	4 (23.5%)
		Not applicable	1 (5.9%)
		Total valid response	17 (100.0%)
		Total missing	27
Uncomplicated vitrectomy	Is the treatment available?	Available within country	20 (80.0%)
		Available locally	10 (40.0%)
		Available in practice	7 (28.0%)
		Not available	1 (4.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	25 (100.0%)
		Total missing	19
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	9 (40.9%)
		Mean	6.3
		SD	5.2
		Median	6.0
		Min	1
		Max	16
		Don't know/not sure	10 (45.5%)
		Not applicable	3 (13.6%)
		Total valid response	22 (100.0%)
		Total missing	22
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	7 (36.8%)
		Mean	4.4
		SD	5.2
		Median	2.0
		Min	1
		Max	16
		Don't know/not sure	11 (57.9%)
		Not applicable	1 (5.3%)
		Total valid response	19 (100.0%)
		Total missing	25
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	5 (27.8%)
		Mean	5.4
		SD	4.6
		Median	4.0

Type of Treatment	Question	Response/time	Ophthalmologist
		Min	1
		Max	12
		Don't know/not sure	11 (61.1%)
		Not applicable	2 (11.1%)
		Total valid response	18 (100.0%)
		Total missing	26
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	20 (76.9%)
		Available locally	10 (38.5%)
		Available in practice	6 (23.1%)
		Not available	3 (11.5%)
		Total valid response	26 (100.0%)
		Total missing	18
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	8 (40.0%)
		Mean	8.0
		SD	7.1
		Median	4.5
		Min	2
		Max	20
		Don't know/not sure	10 (50.0%)
		Not applicable	2 (10.0%)
		Total valid response	20 (100.0%)
		Total missing	24
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	7 (38.9%)
		Mean	6.4
		SD	6.4
		Median	4.0

Type of Treatment	Question	Response/time	Ophthalmologist
		Min	2
		Max	20
		Don't know/not sure	10 (55.6%)
		Not applicable	1 (5.6%)
		Total valid response	18 (100.0%)
		Total missing	26
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	5 (29.4%)
		Mean	9.2
		SD	9.4
		Median	6.0
		Min	2
		Max	25
		Don't know/not sure	10 (58.8%)
		Not applicable	2 (11.8%)
		Total valid response	17 (100.0%)
		Total missing	27

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	21 (87.5%)
	No	3 (12.5%)
	Total valid response	24 (100.0%)
	Total missing	20
Who administer it?	Another provider in your practice	3 (100.0%)
	Total valid response	3 (100.0%)
	Total missing	41

PT 4.7

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	10 (50.0%)
	Patient's age	10 (50.0%)
	Patient's gender	2 (10.0%)
	Presence of comorbidities such as hypertension, etc.	16 (80.0%)
	High glucose levels	14 (70.0%)
	Ability or inability to pay	4 (20.0%)
	Insurance restrictions	2 (10.0%)
	Patient educational level	7 (35.0%)
	Patient adherence to recommendations	13 (65.0%)
	Total valid response	20 (100.0%)
	Total missing	24

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Visual outcome	3 (12.5%)
	Anatomical outcomes	5 (20.8%)
	Both	16 (66.7%)
	Total Valid Response	24 (100.0%)
	Total missing	20

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy undilated	11 (45.8%)
	Fundoscopy dilated	20 (83.3%)
	Retinal photo	9 (37.5%)
	Optical Coherence Tomography	18 (75.0%)
	Fluorescein Angiography	15 (62.5%)

Question	Response	Ophthalmologist
	Total valid response	24 (100.0%)
	Total missing	20

PT 4.10

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	In time for screening	5 (20.8%)
	When visual problems have already occurred	15 (62.5%)
	Too late for effective treatment	4 (16.7%)
	Total Valid Response	24 (100.0%)
	Total missing	20

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	11 (47.8%)
	No	12 (52.2%)
	Total valid response	23 (100.0%)
	Total missing	21
If yes, When was your last training?	Five or more years ago	5 (45.5%)
	Greater than 1 year ago but less than 5 years	5 (45.5%)
	Within the past year	1 (9.1%)
	Total valid response	11 (100.0%)
	Total missing	33

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	22 (95.7%)
	No	1 (4.3%)
	Total Valid	23 (100.0%)

Question	Response	Ophthalmologist
	Response	
	Total missing	21

PT 4.13

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Health fairs for all	6 (26.1%)
	Health fairs for people with diabetes	5 (21.7%)
	Mobile screening centers	5 (21.7%)
	At vision centers	8 (34.8%)
	Other	2 (8.7%)
	Not done	3 (13.0%)
	Don't know/Not sure	3 (13.0%)
	Total valid response	23 (100.0%)
	Total missing	21

PT 4.14

Question	Response	Ophthalmologist
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Reimbursement/restrictions on approved therapy	11 (47.8%)
	Late diagnosis	16 (69.6%)
	Referral pathways	3 (13.0%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	15 (65.2%)
	No universal guidelines on referral/screening	3 (13.0%)
	No universal guidelines on how to treat	4 (17.4%)
	No universal guideline on when to treat	3 (13.0%)
	Current available therapies not effective	2 (8.7%)
	Government/insurance not able to cover patient costs	11 (47.8%)
	Multi-disciplinary team integration is poor	13 (56.5%)

Question	Response	Ophthalmologist
	Ineffective screening services	9 (39.1%)
	Other	2 (8.7%)
	Total valid response	23 (100.0%)
	Total missing	21

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Cardiovascular disease/Stroke	3 (13.0%)	1 (14.3%)	1 (25.0%)
	Kidney disease	1 (4.3%)	2 (28.6%)	2 (50.0%)
	Vision loss	11 (47.8%)	5 (71.4%)	2 (50.0%)
	Broken bones or fractures	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Amputation	2 (8.7%)	1 (14.3%)	0 (0.0%)
	Loss of feeling in hands or toes (neuropathy)	2 (8.7%)	3 (42.9%)	0 (0.0%)
	Foot ulcers	2 (8.7%)	0 (0.0%)	0 (0.0%)
	Irritable bowel disease	0 (0.0%)	1 (14.3%)	0 (0.0%)
	None	4 (17.4%)	0 (0.0%)	1 (25.0%)
	Don't know/Not sure	6 (26.1%)	1 (14.3%)	0 (0.0%)
	Total Valid Response	23 (100.0%)	7 (100.0%)	4 (100.0%)
	Total missing	23	6	5

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

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	7 (25.9%)	7 (58.3%)	5 (62.5%)
Impairment or health problem			
Diabetes	6 (75.0%)	6 (100.0%)	4 (100.0%)
Mental or emotional health	3 (42.9%)	1 (20.0%)	1 (33.3%)
Arthritis/rheumatism	2 (33.3%)	1 (25.0%)	2 (66.7%)

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Back or neck problem	2 (33.3%)	1 (25.0%)	3 (100.0%)
Hypertension/high blood pressure	2 (33.3%)	1 (20.0%)	1 (33.3%)
Eye/vision problem	2 (28.6%)	5 (100.0%)	4 (100.0%)
Lung/breathing problem	2 (25.0%)	2 (50.0%)	0 (0.0%)
Fractures, bone/joint injury	1 (16.7%)	0 (0.0%)	0 (0.0%)
Hearing problem	1 (16.7%)	0 (0.0%)	0 (0.0%)
Walking problem	0 (0.0%)	1 (25.0%)	1 (33.3%)
Heart problem	0 (0.0%)	1 (25.0%)	1 (33.3%)

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	18 (69.2%)	4 (36.4%)	2 (22.2%)
Self-rated health: Poor	8 (30.8%)	7 (63.6%)	7 (77.8%)
Physically unhealthy days	6 (35.3%)	3 (60.0%)	5 (71.4%)
Mentally unhealthy days	2 (14.3%)	4 (57.1%)	6 (85.7%)
Unhealthy days	7 (53.8%)	5 (83.3%)	7 (87.5%)
Activity limitation days	4 (30.8%)	7 (87.5%)	4 (57.1%)

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

EXP 4

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	37 (63.8%)	9 (47.4%)	26 (70.3%)
	Oral medicine	29 (50.0%)	1 (5.3%)	26 (70.3%)
	Exercise	18 (31.0%)	7 (36.8%)	10 (27.0%)
	Insulin	30 (51.7%)	17 (89.5%)	12 (32.4%)
	Natural/Herbal medicine	2 (3.4%)		1 (2.7%)
	None of the above	2 (3.4%)	1 (5.3%)	1 (2.7%)

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	15 (57.7%)	4 (36.4%)	4 (44.4%)
	Working without pay at home (e.g. housework, farming)	1 (3.8%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (3.8%)	0 (0.0%)	0 (0.0%)
	Retired	4 (15.4%)	1 (9.1%)	1 (11.1%)
	Student	2 (7.7%)	0 (0.0%)	0 (0.0%)
	Not working	3 (11.5%)	6 (54.5%)	4 (44.4%)
	Total Valid Response	26 (100.0%)	11 (100.0%)	9 (100.0%)
	Total missing	20	2	0
Do you receive assistance from the government?	Income assistance	3 (12.0%)	2 (20.0%)	1 (11.1%)
	Medical assistance	2 (8.0%)	3 (30.0%)	0 (0.0%)
	Pension assistance	3 (12.0%)	1 (10.0%)	2 (22.2%)
	None of the above	18 (72.0%)	4 (40.0%)	6 (66.7%)
	Total valid response	25 (100.0%)	10 (100.0%)	9 (100.0%)
	Total missing	21	3	0
Did you have trouble paying for food at anytime during the past year?	Yes	3 (12.0%)	4 (36.4%)	4 (44.4%)
	No	22 (88.0%)	7 (63.6%)	5 (55.6%)
	Total Valid Response	25 (100.0%)	11 (100.0%)	9 (100.0%)
	Total missing	21	2	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	3 (50.0%)	3 (75.0%)	2 (100.0%)
	Working without pay at	1 (16.7%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	home (e.g. housework, farming)			
	Student	2 (33.3%)	0 (0.0%)	0 (0.0%)
	Not working	0 (0.0%)	1 (25.0%)	0 (0.0%)
	Total Valid Response	6 (100.0%)	4 (100.0%)	2 (100.0%)
	Total missing	6	1	0
Do you receive assistance from the government?	Income assistance	1 (16.7%)	1 (25.0%)	0 (0.0%)
	Medical assistance	0 (0.0%)	2 (50.0%)	0 (0.0%)
	None of the above	5 (83.3%)	1 (25.0%)	2 (100.0%)
	Total valid response	6 (100.0%)	4 (100.0%)	2 (100.0%)
	Total missing	6	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	1 (20.0%)	3 (75.0%)	0 (0.0%)
	No	4 (80.0%)	1 (25.0%)	2 (100.0%)
	Total Valid Response	5 (100.0%)	4 (100.0%)	2 (100.0%)
	Total missing	7	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 5.3: Age group 40-59 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	11 (84.6%)	1 (25.0%)	2 (40.0%)
	Not working	2 (15.4%)	3 (75.0%)	3 (60.0%)
	Total Valid Response	13 (100.0%)	4 (100.0%)	5 (100.0%)
	Total missing	11	0	0
Do you receive assistance from the government?	Income assistance	2 (15.4%)	0 (0.0%)	1 (20.0%)
	Medical assistance	2 (15.4%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Pension assistance	1 (7.7%)	0 (0.0%)	1 (20.0%)
	None of the above	9 (69.2%)	3 (100.0%)	3 (60.0%)
	Total valid response	13 (100.0%)	3 (100.0%)	5 (100.0%)
	Total missing	11	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	2 (15.4%)	0 (0.0%)	3 (60.0%)
	No	11 (84.6%)	4 (100.0%)	2 (40.0%)
	Total Valid Response	13 (100.0%)	4 (100.0%)	5 (100.0%)
	Total missing	11	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	1 (14.3%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (14.3%)	0 (0.0%)	0 (0.0%)
	Retired	4 (57.1%)	1 (33.3%)	1 (50.0%)
	Not working	1 (14.3%)	2 (66.7%)	1 (50.0%)
	Total Valid Response	7 (100.0%)	3 (100.0%)	2 (100.0%)
	Total missing	3	1	0
Do you receive assistance from the government?	Income assistance	0 (0.0%)	1 (33.3%)	0 (0.0%)
	Medical assistance	0 (0.0%)	1 (33.3%)	0 (0.0%)
	Pension assistance	2 (33.3%)	1 (33.3%)	1 (50.0%)
	None of the above	4 (66.7%)	0 (0.0%)	1 (50.0%)
	Total valid response	6 (100.0%)	3 (100.0%)	2 (100.0%)
	Total missing	4	1	0

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Did you have trouble paying for food at anytime during the past year?	Yes	0 (0.0%)	1 (33.3%)	1 (50.0%)
	No	7 (100.0%)	2 (66.7%)	1 (50.0%)
	Total Valid Response	7 (100.0%)	3 (100.0%)	2 (100.0%)
	Total missing	3	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?		0 (0.0%)	0 (0.0%)	0 (0.0%)
Do you receive assistance from the government?	Total valid response	0	0	0
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?		0 (0.0%)	0 (0.0%)	0 (0.0%)

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

EXP 6

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
All respondents		68 (100%)	21 (30.9%)	44 (64.7%)	13 (19.1%)	9 (13.2%)
Gender	Male	29 (61.7%)	11 (37.9%)	18 (62.1%)	4 (13.8%)	8 (27.6%)
	Female	18 (38.3%)	4 (22.2%)	12 (66.7%)	8 (44.4%)	1 (5.6%)
	Total Missing	21	6	14	1	0
Age	18-39 yrs	19 (27.9%)	10 (52.6%)	9 (47.4%)	5 (26.3%)	2 (10.5%)
	40-59 yrs	33 (48.5%)	8 (24.2%)	24 (72.7%)	4 (12.1%)	5 (15.2%)
	60-79 yrs	16 (23.5%)	3 (18.8%)	11 (68.8%)	4 (25.0%)	2 (12.5%)
Time since diagnosis	Within the last year	5 (7.9%)	0 (0.0%)	5 (100.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 years ago	12 (19.0%)	3 (25.0%)	9 (75.0%)	0 (0.0%)	0 (0.0%)
	6 - 10 years ago	18 (28.6%)	4 (22.2%)	13 (72.2%)	7 (38.9%)	0 (0.0%)

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
	11 - 15 years ago	11 (17.5%)	5 (45.5%)	6 (54.5%)	3 (27.3%)	1 (9.1%)
	16 - 20 years ago	8 (12.7%)	3 (37.5%)	4 (50.0%)	1 (12.5%)	5 (62.5%)
	21 years ago or longer	7 (11.1%)	4 (57.1%)	3 (42.9%)	2 (28.6%)	3 (42.9%)
	Don't know/Not sure	2 (3.2%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	5	2	3	0	0
Control of Diabetes	Controlled	29 (56.9%)	7 (24.1%)	21 (72.4%)	4 (13.8%)	3 (10.3%)
	Not controlled	21 (41.2%)	9 (42.9%)	11 (52.4%)	8 (38.1%)	6 (28.6%)
	Don't know/Not sure	1 (2.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	17	4	12	1	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	5 (38.5%)	6 (75.0%)
	No	8 (61.5%)	1 (12.5%)
	Don't know/Not sure	0 (0.0%)	1 (12.5%)
	Total valid response	13 (100.0%)	8 (100.0%)
	Total missing	0	1
What treatment did you receive?	Laser	4 (80.0%)	6 (100.0%)
	Anti-VEGF	1 (20.0%)	2 (33.3%)
	Surgery	1 (20.0%)	1 (16.7%)
	Other	1 (20.0%)	0 (0.0%)
	Total valid response	5 (100.0%)	6 (100.0%)
	Total missing	8	3
Did you complete the treatment?	Yes	1 (20.0%)	4 (66.7%)

Question	Response	With DED n (%)	With DME n (%)
	No	1 (20.0%)	1 (16.7%)
	Still receiving treatment	2 (40.0%)	0 (0.0%)
	Don't know/Not sure	1 (20.0%)	1 (16.7%)
	Total valid response	5 (100.0%)	6 (100.0%)
	Total missing	8	3
Do you feel that the treatment worked?	Yes, and vision improved	0 (0.0%)	2 (40.0%)
	Yes, but vision stayed the same	1 (33.3%)	1 (20.0%)
	No	0 (0.0%)	1 (20.0%)
	Still waiting to know	1 (33.3%)	1 (20.0%)
	Don't know/Not sure	1 (33.3%)	0 (0.0%)
	Total valid response	3 (100.0%)	5 (100.0%)
	Total missing	10	4
What is/are the reason(s) that you did not complete the treatment?	Treatment was too expensive	0 (0.0%)	1 (100.0%)
	I was fearful (scared) of treatment	0 (0.0%)	1 (100.0%)
	Other	1 (100.0%)	0 (0.0%)
	Total valid response	1 (100.0%)	1 (100.0%)
	Total missing	12	8
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	5 (71.4%)	1 (100.0%)
	Treatment is not accessible	1 (14.3%)	0 (0.0%)
	Too expensive	1 (14.3%)	0 (0.0%)
	No insurance	1 (14.3%)	0 (0.0%)
	I'm fearful of treatment	1 (14.3%)	0 (0.0%)
	Total valid response	7 (100.0%)	1 (100.0%)
	Total missing	6	8

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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