DR Barometer
Shifting the needle

The Diabetic Retinopathy Barometer Report

Costa Rica

IFA
IAPB
International Diabetes Federation
BAYER

Contents

Introduction: Global Study **3**
- Goal 3
- Background 3
- Study Populations 4

Introduction: Costa Rica Study **5**
- Demographic Characteristics 5
- Diabetes Profile 5
- Study Populations: Costa Rica 5

Costa Rica DR Barometer Findings: Adults with Diabetes **8**
- Key Demographic Characteristics 8
- Knowledge and Management of Diabetes 10
- Nature and Information about Complications 11
- Information about Diabetic Eye Disease and Diabetic Macular Edema 12
- Screening for Diabetic Eye Disease 13
- Treatment of Diabetic Eye Disease and Diabetic Macular Edema 14
- Impact of Diabetic Eye Disease and Diabetic Macular Edema 15
- Self-reported Quality of Life 17

Costa Rica DR Barometer Findings: Health Care Professionals **18**
- Key Demographic Characteristics 18
- Clinical Practice Characteristics 19
- Patient Education Information 20
- Guidelines and Protocols 21
- Screening Protocols and Barriers in the Care Pathway 22

Costa Rica DR Barometer Findings: Ophthalmologists **24**
- Screening 24
- Treatment and Challenges 24

Costa Rica DR Barometer Summary **26**

References and Acknowledgement **28**

Appendices **29**

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 Costa Rica.

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

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

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

Goal

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

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

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

Background

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

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

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

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

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

Study Populations

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

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

The results from this survey provide new evidence reflecting concerns from the voices of thousands of people with diabetes and health care professionals around the world. This study provides a rich resource for generating unique insights into the real-life experiences, 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% were 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 health professionals.

Introduction
Costa Rica Study

Demographic Characteristics[1]

Costa Rica is estimated to be the eleventh most populous country in North America and eighteenth in Latin America with a population of approximately 4.8 million.

Currently, ~22% of Costa Rica's population is under the age of 15 years and only 9% of the population is 65 years and older.

Although Costa Rica's population is expected to increase within the next few decades, the ageing of the large middle-aged cohorts and increasing life expectancy will lead to dramatic shifts in the age structure. By 2050, those under the age of 15 years will make up 19% of the total population while those aged 65 years and older will comprise ~24% of the total population. In just over thirty years, the population of older adults (those aged 65years and older) will triple, reaching an all-time high of approximately 1.3 million.

Diabetes Profile[2]

There are 415 million people with diabetes in the world and ~29.6 million people in the South and Central America Region. By 2040, this number is expected to rise to 48.8 million. Twenty countries and territories comprise the South and Central American Region, from Cuba to Brazil to Chile and Argentina to Guatemala.

Costa Rica has over 278, 900 (228.3-332.4‡) adults living with diabetes and the national prevalence is 8.6% (7.0-10.2‡). Deaths attributed to diabetes in 2015 were 1, 571 and the estimated number of undiagnosed cases was ~111, 700 (118.3-172.3‡).

Study Populations: Costa Rica

As reported by 74 respondents with diabetes in Costa Rica, 32% were diagnosed with DED and a further 11% with DME.

Twelve health care professionals completed the survey in Costa Rica. Of these, four were diabetes specialist providers (33%), six were ophthalmologists (50%), and two were primary care providers (17%).

The DR Barometer Study: **Costa Rica Overview**

The DR Barometer study was conducted in 41 countries. In Costa Rica, 74 adults with diabetes and 12 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

40%

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

27%

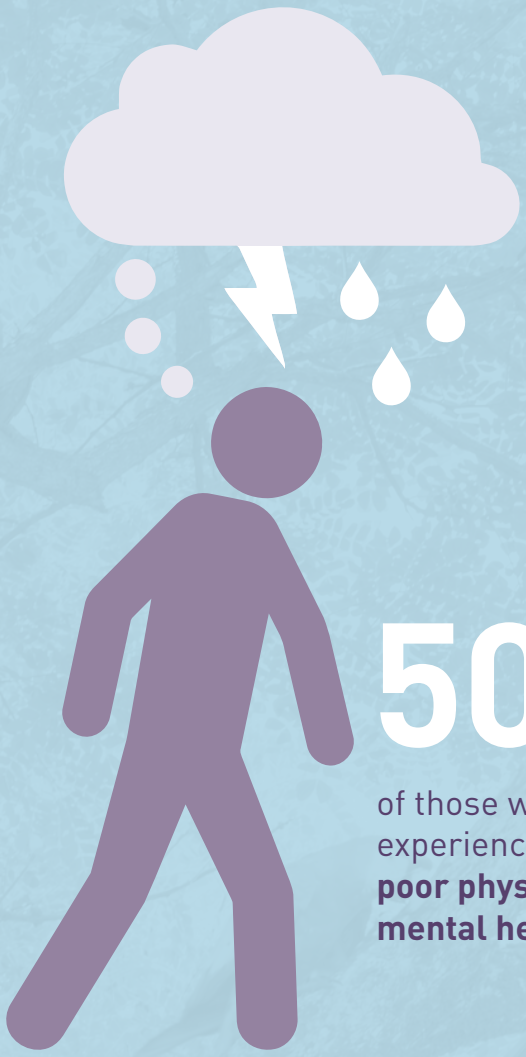
of patients either **never discussed eye complications with their doctor** or did so only after the onset of symptoms

DR: Diabetic Retinopathy
DME: Diabetic Macular Edema

DRBarometer.com

IFA · IAPB · International Diabetes Federation · BAYER

DR Barometer
Shifting the needle

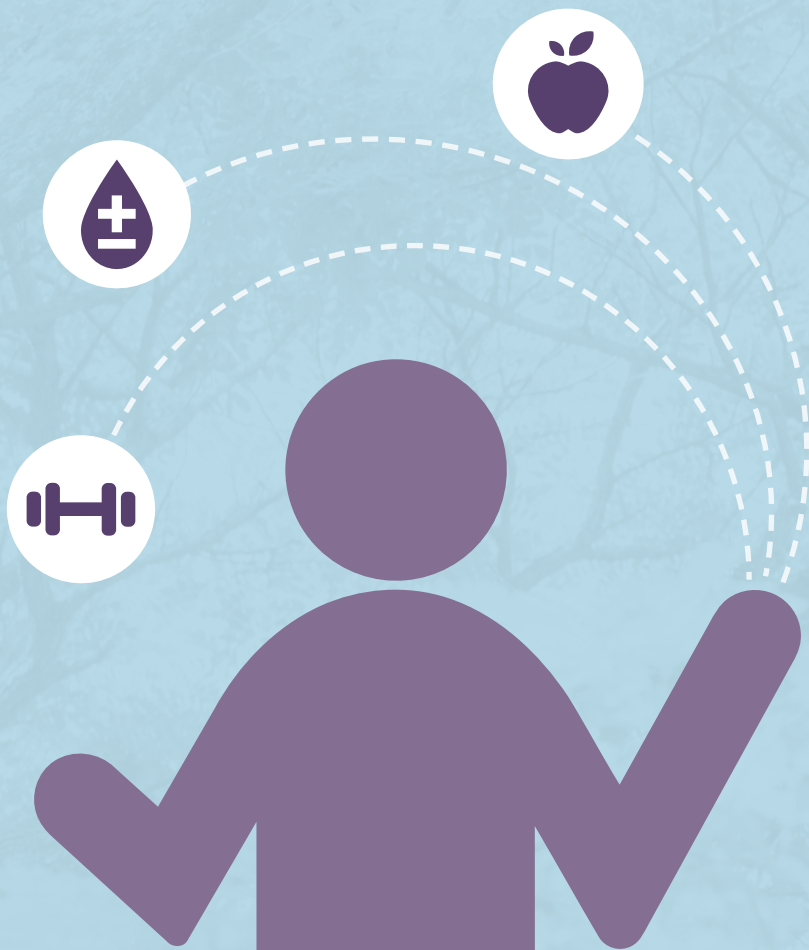


92%

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

50%

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



33%

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

Costa Rica
DR Barometer Findings:
Adults with Diabetes

Key Demographic Characteristics

Seventy-four adults with diabetes completed the patient survey in Costa Rica: 42% were female and 58% were male. Seventy-six percent lived in an urban setting and 24% in a non-urban setting (see Appendix Table 4.2).

The education level of respondents were as follows: 24% did not complete primary school, 35% were educated to a primary school level, 24% to a secondary school level, 13% to a college or university level, and 5.6% to a graduate or post-graduate level (see Appendix Table 4.3).

Twenty-three percent of all respondents were in paid employment, 21% were retired, and 39% were not working (see Appendix Table 4.4).

Most respondents (62%) were aged between 60 and 79 years (5.4% were 18-39 years, 26% were 40-59 years and 6.8% were 80 years and over). Thirty-one percent were of traditional working age (18- 59 years) (see Table 1).

Of significance is the finding that almost three-quarters (73%) of those surveyed were either unsure of or did not know their type of diabetes, 14% had been diagnosed with type 1 diabetes and 14% with type 2 diabetes (see Appendix Table 2.1).

Thirty-two percent of respondents (n=24) had been diagnosed with DED and a further 11% (n=8) with DME.

Most of those surveyed were diagnosed with diabetes between 1-5 years ago (33%) or more than 21 years ago (22%). Fifteen percent were diagnosed between 6-10 years ago, 16% 16-20 years ago, 12% 11-15 years ago and 1% within the last year (see Appendix Table 2.2).

Amongst 18 to 39 year-olds 50% had type 1 and 50% had type 2 diabetes. In the 40-59 age group, 11% had type 1 and 21% had type 2 diabetes. Thirteen percent of 60-79 year-olds had type 1 diabetes and 8.7% had type 2.

Most people with DED (37%) were aged 40-59 years and there was a further 30% aged 60-79 years. All respondents with DME (n=8) were aged between 60-79 years.

In those diagnosed 1-5 years ago, 13% were diagnosed with DED and 8.3% with DME. The proportion increased to 44% of those with DED and 11% with DME for those 11-15 years since diagnosis. Fifty-six percent of respondents diagnosed more than 21 years prior had DED and 25% had DME.

While most (78%) respondents said that their diabetes was well controlled, almost one in five felt that this was not the case. For those who reported their diabetes was controlled, 33% had DED, and 11% had DME and for those whose condition was not well-controlled 33% had DED and 13% had DME.

Table 1: Summary of key characteristics of adults with diabetes

Group	Subgroup	All Respondents	Type 1 diabetes	Type 2 diabetes	With DED	With DME
All respondents		74 (100.0%)	10 (13.5%)	10 (13.5%)	24 (32.4%)	8 (10.8%)
Gender	Male	42 (58.3%)	6 (14.3%)	2 (4.8%)	11 (26.2%)	4 (9.5%)
	Female	30 (41.7%)	3 (10.0%)	7 (23.3%)	13 (43.3%)	4 (13.3%)
	Total Missing	2	1	1	0	0
Age	18-39 yrs.	4 (5.4%)	2 (50.0%)	2 (50.0%)	0 (0.0%)	0 (0.0%)
	40-59 yrs.	19 (25.7%)	2 (10.5%)	4 (21.1%)	7 (36.8%)	0 (0.0%)
	60-79 yrs.	46 (62.2%)	6 (13.0%)	4 (8.7%)	14 (30.4%)	8 (17.4%)
	80 yrs. plus	5 (6.8%)	0 (0.0%)	0 (0.0%)	3 (60.0%)	0 (0.0%)
Time since diagnosis	Within the last year	1 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 yrs.	24 (32.9%)	3 (12.5%)	1 (4.2%)	3 (12.5%)	2 (8.3%)
	6 - 10 yrs.	11 (15.1%)	1 (9.1%)	1 (9.1%)	4 (36.4%)	0 (0.0%)
	11 - 15 yrs.	9 (12.3%)	1 (11.1%)	2 (22.2%)	4 (44.4%)	1 (11.1%)
	16 - 20 yrs.	12 (16.4%)	3 (25.0%)	2 (16.7%)	4 (33.3%)	1 (8.3%)
	21 yrs. plus	16 (21.9%)	2 (12.5%)	3 (18.8%)	9 (56.3%)	4 (25.0%)
	Total Missing	1	0	1	0	0
Control of Diabetes	Controlled	57 (78.1%)	10 (17.5%)	7 (12.3%)	19 (33.3%)	6 (10.5%)
	Not controlled	15 (20.5%)	0 (0.0%)	2 (13.3%)	5 (33.3%)	2 (13.3%)
	Don't know/ Not sure	1 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	0	1	0	0

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

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

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

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

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

Knowledge and Management of Diabetes

Almost all (99%) of those surveyed saw a health care professional for their diabetes, with 22% seeing a diabetes specialist (on average 3.6 times per year) and 78% seeing a general or family doctor (on average 3.7 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Most (96%) received information from a doctor or nurse, 26% from a health educator and 21% from a nutritionist or dietician. Family and friends, and radio and print media were sources of information for 19% respectively (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=73)
Doctor or nurse	70 (95.9%)
Health educator	19 (26.0%)
Nutritionist or dietician	15 (20.5%)
Family/Friends/Neighbours	14 (19.2%)
TV/Radio/Newspaper/Magazines	14 (19.2%)
Internet	7 (9.6%)
Pharmacist	5 (6.8%)
Diabetes organisation or other health organisation	4 (5.5%)
None of the above	3 (4.1%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 90% managed their diabetes with diet, 60% with exercise, 50% with oral medicine and 20% with natural/ herbal medicine. All respondents with type 2 diabetes managed their condition with insulin, 78% with diet, 78% with oral medicine, 33% with exercise, and 22% with natural or herbal medicine.

Enrolment in diabetes management programmes appears to be a significant and serious gap, as the surveyed showed that only 6% of respondents were enrolled. All of these respondents said the programme included information on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

Blood glucose checks and eye checks were part of the regimen of tests taken by many respondents. For those who had eye checks (96%), these occurred at less than 6 months (75%), 6 - 12 months (19%), and greater than 12 months (1.4%) (see Appendix Table 2.7).

The main challenges in controlling diabetes were: it was too hard to eat the right things (62%), travel to their regular doctor or specialist was difficult (33%), respondents did not know enough about their condition (33%), there were too many other things to do (32%), and there were long wait times for an appointment to see their doctor or specialist (26%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (96%), support from family or friends (60%), health education and information (30%), coordination of healthcare and services by a professional (9.6%) and an emergency helpline (6.8%) were viewed as important to improving the management of the respondents' diabetes (see Appendix Table 2.10).

Nature and Information about Complications

Almost all (99%) of those surveyed were aware that vision loss is a consequence of diabetes, as well as other complications such as amputation (95%), foot ulcers (93%), neuropathy (88%) and kidney disease (81%) (see Appendix Table 2.11).

Vision loss (43%) and amputation (40%) were the complications of greatest concern followed by neuropathy (5.5%), kidney disease (2.7%), and foot ulcers (1.4%) (see Appendix Table 2.12).

Only 14% of respondents reported that they had no complications of diabetes, which suggests that most had complications, including 81% with vision loss, neuropathy (40%), kidney disease (21%), cardiovascular disease or stroke (18%), and foot ulcers (9.6%) (see Figure 1 and Appendix Table 2.13).

Aside from vision loss, there was a considerable increase in the frequency of people with DED and DME experiencing complications compared to those without DED. Twenty-nine percent of those without DED had neuropathy vs 50% with DED and 63% with DME. The trend was similar with reporting of kidney disease: 15% without DED vs 25% with DED and 38% with DME (see Table 3 and Appendix EXP 1).

Figure 1: Presence of complications

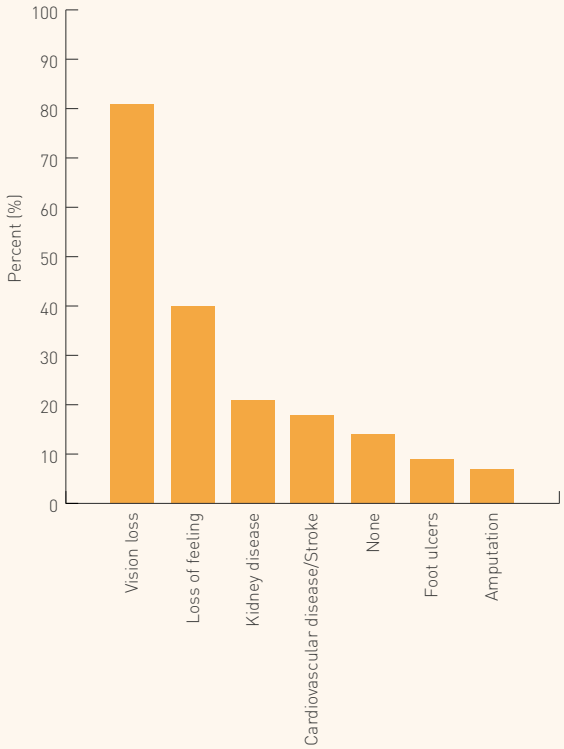


Table 3: Presence of complications without DED, with DED or DME

Complication	Without DED (n=41)	With DED (n=24)	With DME (n=8)
Any	31 (75.6%)	24 (100.0%)	8 (100.0%)
Vision loss	27 (65.9%)	24 (100.0%)	8 (100.0%)
Loss of feeling in hands or toes (neuropathy)	12 (29.3%)	12 (50.0%)	5 (62.5%)
Kidney disease	6 (14.6%)	6 (25.0%)	3 (37.5%)
Cardiovascular disease/Stroke	8 (19.5%)	4 (16.7%)	1 (12.5%)
Amputation	1 (2.4%)	3 (12.5%)	1 (12.5%)
Foot ulcers	4 (9.8%)	2 (8.3%)	1 (12.5%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)
None	10 (24.4%)	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".

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

Forty-three percent of respondents stated that eye complications were discussed with their health care professional at every visit yet 23% said the conversation only happened when symptoms arose. The frequency of discussions ranged from multiple times a year (18%), once a year (12%), and never (4%) (see Appendix Table 2.14).

Seventy-seven percent of those surveyed said that they did what they could to prevent vision problems (e.g. having routine screenings and visiting specialists), yet misperceptions around vision changes and preventions were evident with 43% thinking that vision problems were a normal part of ageing and 4% made no special effort to take a preventative approach to their eye health (see Appendix Table 2.15).

Twenty-five percent of respondents received information about DR and DME with the doctor or nurse being the most common source (22%). An important finding, which requires further investigation, is that 75% did not receive information from traditional sources such as their health care professional, educator and TV, radio, newspaper or magazines (see Table 4 and Appendix Table 3.9).

Table 4: Source of information about DR and DME

Source	All respondents (n=72)
Doctor/Nurse	16 (22.2%)
Health educator	3 (4.2%)
TV/Radio/Newspaper/ Magazines	3 (4.2%)
None of the above	54 (75.0%)

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

Only 58% of respondents reported having had an eye exam for DED, with 93% having the exam within the last year and a further 7.1% more than one year ago but less than two years ago. Three percent of those surveyed were aware of government sponsored screening programmes for DED (see Appendix Table 3.1 and Table 3.2).

While three-quarters surveyed thought they should have their eyes examined for DED once a year, there were varied small numbers of people who thought it should happen every two years (see Appendix Table 3.4).

A number of significant barriers to eye exams were identified by respondents including: long wait times to schedule an appointment (63%) or on the day of the visit (43%), the high cost of screening and treatment (57%) the complicated and lengthy referral process (43%) and the lack of available eye exams near their home (47%). Also of importance is the finding that 38% of respondents did not know enough about their diabetes condition (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=72)
Long wait time for appointment	45 (62.5%)
They are expensive	41 (56.9%)
Eye exams are not available near my home	34 (47.2%)
Long wait time on the day of the visit	31 (43.1%)
Referral process is complicated or takes too long	31 (43.1%)
Don't know much about my condition	27 (37.5%)
Clinics are too small or lack necessary equipment/staff	26 (36.1%)
Limited access to diabetes specialists	21 (29.2%)
Too many other things to do or worry about	19 (26.4%)
Recommended treatments for eye problems are not available	18 (25.0%)
Fear of treatment/results	16 (22.2%)
Burden on my family/friends	15 (20.8%)
I'm not likely to have eye complications	2 (2.8%)
Other	4 (5.6%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately for those with DED and DME. For those with DED, 96% received treatment, which was on going for one respondent, the most common treatment being laser (67%) and surgery (67%). Almost three-quarters (74%) had completed treatments and 83% of this group said that it had been successful and their vision had either improved (67%) or stayed the same (17%) (see Table 6).

For the one respondent with DED who had not received treatment, the reason reported was that they were 'still waiting for treatment'.

All respondents with DME (n=2) had received treatment, that being anti-VEGF and this had been successful with improvements in their vision. There was a strong preference by those with DME to have a proactive approach in the treatment pathway to prevent further vision loss rather than a reactive approach once further vision loss occurred (see Appendix Table 3.8).

Table 6: Treatment characteristics of patients with DED and DME

Question	Response	With DED (n=24)	With DME (n=2)
Have you had any treatment for diabetic eye disease?	Yes	23 (95.8%)	2 (100.0%)
	No	1 (4.2%)	0 (0.0%)
What treatment did you receive?	Laser	16 (69.6%)	1 (50.0%)
	Anti-VEGF	8 (34.8%)	2 (100.0%)
	Surgery	16 (69.6%)	1 (50.0%)
Did you complete the treatment?	Yes	17 (73.9%)	1 (50.0%)
	No	5 (21.7%)	0 (0.0%)
	Still receiving treatment	1 (4.3%)	1 (50.0%)
Do you feel that the treatment worked?	Yes, and vision improved	12 (66.7%)	2 (100.0%)
	Yes, but vision stayed the same	3 (16.7%)	0 (0.0%)
	No	2 (11.1%)	0 (0.0%)
	Still waiting to know	1 (5.6%)	0 (0.0%)
What is/ are the reason(s) that you did not complete the treatment?	Other	5 (100.0%)	0 (0.0%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	Still waiting for treatment	1 (100.0%)	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

Almost all (93%) of those diagnosed with DED or DME said that their vision was affected (58% significantly, 35% slightly) (see Appendix Table 3.6).

Ninety-two percent of these respondents reported vision issues affecting their daily lives in various ways, such as: travelling (79%), household responsibilities (such as cooking or cleaning) (50%), working or keeping a job (42%), social interactions with family or friends (33%), managing their underlying diabetes (33%), leisure activities or exercise (29%) and difficulty driving a vehicle (21%) (see Table 7).

Table 7: Activities affected through vision impairment and loss

	All Respondents (n=24)
Travelling	19 (79.2%)
Household responsibilities, such as cooking or cleaning	12 (50.0%)
Work or keeping a job	10 (41.7%)
Social interactions with family/ friends	8 (33.3%)
Managing my diabetes	8 (33.3%)
Leisure activities/exercise	7 (29.2%)
Driving (a car/vehicle)	5 (20.8%)
None	2 (8.3%)

Twenty-two percent of those with DED and none with DME were in paid employment, compared with 28% of those without DED. Patients with vision complications reported difficulties with work or keeping a job (42%) and 35% of those with DED (n=8) were not working (see Table 8 and Appendix EXP 5.1).

Fifty-six percent of those surveyed did not receive assistance from the government while 39% received pension assistance; 38% of respondents without DED received government assistance vs 50% with DME and 52% with DED. It should be noted that the sample size is very small, and the number of respondents that were receiving government assistance equally small (see Appendix Table 4.5).

Seventy-three percent of respondents had no trouble paying for food at any time during the past year (see Appendix Table 4.6).

Over half (56%) said that their access to health care was affected, and for 32% it was reportedly affected by their age (see Appendix Table 4.7). Sixty-one percent were worried about their health, and 9.7% about family, while 8.3% were not worried about any of the items in the survey (see Appendix Table 4.8).

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

Question	Response	Without DED (n=40)	With DED (n=23)	With DME (n=8)
Are you currently working?	Working for pay	11 (27.5%)	5 (21.7%)	0 (0.0%)
	Working without pay at home (e.g. housework, farming)	6 (15.0%)	3 (13.0%)	2 (25.0%)
	Retired	6 (15.0%)	7 (30.4%)	2 (25.0%)
	Student	1 (2.5%)	0 (0.0%)	0 (0.0%)
	Not working	16 (40.0%)	8 (34.8%)	4 (50.0%)
Question	**Response**	**Without DED (n=40)**	**With DED (n=23)**	**With DME (n=8)**
Do you receive assistance from the government?	Income assistance	0 (0.0%)	3 (13.0%)	2 (25.0%)
	Medical assistance	3 (7.5%)	2 (8.7%)	1 (12.5%)
	Pension assistance	15 (37.5%)	11 (47.8%)	2 (25.0%)
	None of the above	25 (62.5%)	11 (47.8%)	4 (50.0%)
Question	**Response**	**Without DED (n=40)**	**With DED (n=22)**	**With DME (n=8)**
Did you have trouble paying for food at anytime during the past year?	Yes	9 (22.5%)	8 (36.4%)	2 (25.0%)
	No	31 (77.5%)	14 (63.6%)	6 (75.0%)

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

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

Self-reported Quality of Life

The CDC HRQOL-4 Core Modules of the "Healthy Days Measure" was used to capture information on self-reported quality of life, based on the number of unhealthy days within the last 30 days from when the survey was taken. The reported health status varied depending on whether respondents had been diagnosed with DED or DME (see Table 9).

People with DED and DME experienced a greater impact on both their physical and mental health than those without DED: 61% with DED and 50% with DME had physically unhealthy days; 52% with DED and 50% with DME had mentally unhealthy days vs 40% and 44% without DED had physically and mentally unhealthy days, respectively.

Similarly, a higher proportion of those with DED (93%) and DME (100%) reported days in which their activities were limited due to poor mental or physical health compared to respondents without DED (71%).

Fifty percent of respondents with DED, 50% without DED and 63% with DME reported their health as poor. While reported health was reasonably consistent whether the respondent had DED or not, there was a surprising 22% increase in the activity limitation days between those without DED and those with DED.

Compared with 55% of those without DED, 71% of people with DED and 75% with DME reported limitations to their daily activities as a result of poor health. Where health impacted daily activities, the primary limitations were eye or vision problems, diabetes and hypertension or high blood pressure.

People living with DED and DME had a higher proportion of certain impairments. Of note were potential mobility challenges manifested through eye or vision problems, hypertension or high blood pressure, and back and neck problems. These patients have complex comorbidities that require careful management across the health and social care system (see Appendix EXP 2).

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

Health Status	Without DED	With DED	With DME
Self-rated health: Good	20 (50.0%)	12 (50.0%)	3 (37.5%)
Self-rated health: Poor	20 (50.0%)	12 (50.0%)	5 (62.5%)
Physically unhealthy days	16 (40.0%)	14 (60.9%)	4 (50.0%)
Mentally unhealthy days	17 (43.6%)	12 (52.2%)	4 (50.0%)
Unhealthy days	23 (57.5%)	15 (65.2%)	4 (50.0%)
Activity limitation days	17 (70.8%)	14 (93.3%)	4 (100.0%)

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]: 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.

Costa Rica
DR Barometer Findings:
Health Care Professionals

Key Demographic Characteristics

There were 12 health care professionals who answered at least one of the survey questions in Costa Rica. Of these, two were primary care providers (17%), four were diabetes specialist providers (33%) and six were ophthalmologists (50%) (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.

As a group, health care professionals had been practicing for an average of 16 years, with the ophthalmologist group only practicing for an average of 7 years (see Appendix PT 1.5).

All providers were well-educated (100% with graduate or advanced degree); 43% were female and 57% male. There was an even distribution (29%) across three age groups (30 - 39 years; 40-49 years and 50-59 years) (see Table 10 and Appendix PT 3.1).

Table 10: Summary of key characteristics of health care professionals

Group	Subgroup	All Respondents	Primary Care Provider	Diabetes Specialist	Ophthalmologist
All respondents		12 (100.0%)	2 (16.7%)	4 (33.3%)	6 (50.0%)
Age group	30 - 39 yrs.	2 (28.6%)	0 (0.0%)	0 (0.0%)	2 (66.7%)
	40 - 49 yrs.	2 (28.6%)	0 (0.0%)	1 (25.0%)	1 (33.3%)
	50 - 59 yrs.	2 (28.6%)	0 (0.0%)	2 (50.0%)	0 (0.0%)
	60 - 69 yrs.	1 (14.3%)	0 (0.0%)	1 (25.0%)	0 (0.0%)
Gender	Female	3 (42.9%)	0 (0.0%)	2 (50.0%)	1 (33.3%)
	Male	4 (57.1%)	0 (0.0%)	2 (50.0%)	2 (66.7%)
Education	Graduate or advanced degree (e.g. PhD, MD, etc.)	7 (100.0%)	0 (0.0%)	4 (100.0%)	3 (100.0%)

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

Clinical Practice Characteristics

Forty percent of the providers had their main practice setting in a clinic (40%). For ophthalmologists only the main settings were an eye clinic (80%) and a hospital (20%). All health care professionals worked in an urban setting (see Appendix PT 2.1 and PT 2.2).

Most health care professionals worked in the government sector (40%) and ophthalmologists worked mainly in the government (60%) and combined or mixed sectors (40%) (see Appendix PT 2.3).

Health care professionals reported that 40% of patients pay out-of-pocket (full fees) for services, 20% pay through insurance for services and 10% do not pay for services. This pattern was similar for ophthalmologists, where 40% of patients pay through insurance for services, 20% does not pay for services, and 20% split the cost between themselves and their insurance company (see Appendix PT 2.7).

On average all providers saw 72 patients per week and on average 46% had diabetes; similarly, ophthalmologists saw an average of 66 patients per week and 49% had diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was most commonly more than one week but less than one month (20%), or between one and two months (20%) (see Table 11 and Appendix PT 2.5).

For an appointment with an ophthalmologist, the wait time was usually between one and two months in 40% of practices but for a further 20% of practices, the wait time was more than one week but less than one month.

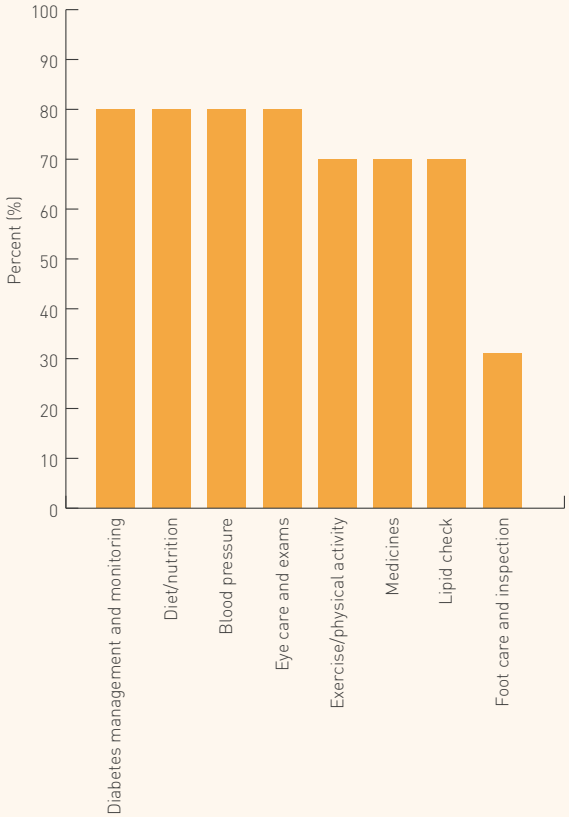
Table 11: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=10)	Ophthalmologist (n=5)
Less than 1 week	1 (10.0%)	0 (0.0%)
More than 1 week but less than 1 month	2 (20.0%)	1 (20.0%)
More than 1 month but less than 2 months	2 (20.0%)	2 (40.0%)
More than 2 months but less than 3 months	1 (10.0%)	1 (20.0%)
More than 3 months but less than 6 months	2 (20.0%)	0 (0.0%)
Other	1 (10.0%)	0 (0.0%)
Don't know/Not sure	1 (10.0%)	1 (20.0%)

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.

Overall, health care providers reported that they had insufficient information about eye complications; 60% said the information on eye complications and diabetes was not sufficient and 10% said that information specific to vision complications was not included. One in five providers had no written information available at all (see Table 12 and Appendix PT 2.11).

Most ophthalmologists (80%) had information on diabetes but information on eye complications was insufficient.

Guidelines and Protocols

Fifty percent of providers and 60% of ophthalmologists had written protocols for the management of diabetes, which were used by staff; however, 30% had no protocols (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, only 20% of health care professionals and 40% of ophthalmologists had written protocols that were used by staff. Forty percent of the protocols available were not used by staff and a surprising 40% of providers, including ophthalmologists, did not have protocols on the management of diabetes-related vision issues available (see Table 12 and Appendix PT 2.13).

Table 12: Availability and use of information and protocols

Question	Response	All Respondents (n=10)	Ophthalmologist (n=5)
Is there written information about diabetes available for patients in your main practice?	Yes, but information on eye complications is not sufficient	6 (60.0%)	4 (80.0%)
	Yes, but no information on eye complications is included	1 (10.0%)	0 (0.0%)
	No written information is available for patients	2 (20.0%)	0 (0.0%)
	Don't know/Not sure	1 (10.0%)	1 (20.0%)
Question	**Response**	**All Respondents (n=10)**	**Ophthalmologist (n=5)**
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	2 (20.0%)	2 (40.0%)
	Yes, available but not used by staff	4 (40.0%)	1 (20.0%)
	Not available	4 (40.0%)	2 (40.0%)

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

Screening Protocols and Barriers in the Care Pathway

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

For patients with type 1 diabetes, 57% of all providers reported that the initial eye exam should occur at the time of diagnosis of diabetes while for those with type 2 diabetes all of the providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, 86% of health care professionals and all ophthalmologists reported that follow-up eye examinations should be conducted every year and all health care professionals and ophthalmologists screen patients for DR (see Appendix PT 2.15 and PT 2.16).

Across all health care professionals, 71% send appointment reminders and 14% do not. Seventy-one percent of health care professionals, including 67% of ophthalmologists, shared information to optimise patient care management (see Appendix PT 2.19 and PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for health care professionals and ophthalmologists respectively were diabetes duration (86%) (67%), presence of comorbidities such as hypertension (86%) (67%), high glucose levels (71%) (67%), and a patient's ability to adhere to recommendations (29%) (33%) (see Appendix PT 2.17).

The major barriers to optimising eye health as perceived by the health care professionals were long wait times for an appointment (71%), complex and lengthy referral processes (57%) and limited access to eye specialists (57%) (see Appendix PT 2.18).

In addition to those barriers cited by all providers, ophthalmologists reported that patients feel eye exams are not important (100%) (see Table 13 and Appendix PT 2.18).

Table 13: Major barriers to optimising eye health

Response	All Respondents (n=7)	Ophthalmologists (n=3)
Long wait time for appointment	5 (71.4%)	3 (100.0%)
Limited access to eye specialists	4 (57.1%)	3 (100.0%)
Patients feel eye exams are not important	3 (42.9%)	3 (100.0%)
Proximity to care	2 (28.6%)	2 (66.7%)
Referral process	4 (57.1%)	2 (66.7%)
Lack of knowledge and/or awareness	2 (28.6%)	2 (66.7%)
Patients fear of treatment/results	2 (28.6%)	2 (66.7%)
Cost of care	3 (42.9%)	1 (33.3%)
Limited access to diabetes specialists	1 (14.3%)	1 (33.3%)
Patients have competing responsibilities and priorities	2 (28.6%)	1 (33.3%)
Patients feel eye complications are unlikely	2 (28.6%)	0 (0.0%)

Costa Rica DR Barometer Findings: Ophthalmologists

Screening

There were three ophthalmologists who completed at least one of the supplementary questions (see Appendix PT 4.1 to PT 4.14) in the DR Barometer Study. Findings should be taken in context of the notably small sample. On average, 48% of patients seen by the ophthalmologist had DR and 35% DME (see Appendix PT 4.1 and PT 4.2).

The most common waiting times for a screening appointment for DED were either between two and three months (33%) or between three and six months (33%) (see Appendix PT 4.3).

Sixty-seven percent of ophthalmologists reported that there was no wait from time of screening to diagnosis, 33% (n=1) reported a wait time between two and three months (see Appendix PT 4.4).

Treatment and Challenges

All ophthalmologists personally administer treatment for DR. The most common factors influencing how ophthalmologists treated DR or DME were the presence of comorbidities such as hypertension (100%), duration of diabetes (67%) and high glucose levels (67%) (see Appendix PT 4.6 and PT 4.7).

The most common outreach venues for screening for DED were health fairs for people with diabetes (67%), health fairs for all (33%), vision centres (33%), and other (33%) (see Appendix PT 4.13).

Ophthalmologists reported that they screen patients for DR based on fundoscopy through dilated pupils; all use optical coherence tomography, 67% use fluorescein angiography and 33% use retinal photo. Ophthalmologists treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and PT 4.9).

All ophthalmologists also reported that the majority of their patients present when visual problems have already occurred (see Appendix PT 4.10).

All ophthalmologists had received specific training on treatment and diagnosis of DR and / or DME: 67% had training within the past year and 33% five or more years ago. All these specialists would be interested in online education and certification on DME, angiogenesis and anti-VEGF therapies (see Appendix PT 4.11 and PT 4.12).

The greatest perceived challenge for improving patient outcomes in DED was a late diagnosis (100%) (n=3) (see Table 14 and Appendix PT 4.14).

Table 14: Challenges for improving outcomes in DED

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

Costa Rica
DR Barometer Summary

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

Costa Rica is estimated to be the eleventh most populous country in North America and eighteenth in Latin America with approximately 4.8 million people. Going forward, ageing of the large middle-aged cohorts, and increasing life expectancy will lead to dramatic shifts in the age structure. By 2050, those under the age of 15 years will make up 19% of the total population while those aged 65 years and older will comprise ~24% of the total population. Between now and 2050, the population of those aged 65 years and older will triple, reaching an all-time high of approximately 1.3 million.

Alongside the demographic changes, the prevalence of people with diabetes is climbing rapidly. Today, Costa Rica has over 278, 900 people living with diabetes and in 2015 there were an estimated 111,700 undiagnosed cases of diabetes.

Fourteen percent of those surveyed identified as having type 1 diabetes and 14% with type 2. Of significant concern was the large proportion (73%) of respondents who were either unsure of or did not know their type of diabetes.

The doctor and / or nurse were the trusted source of information about the condition of diabetes (96%) with the health educator and nutritionist playing a much lesser role with most respondents.

It is unclear from the survey as to whether there is a high visibility or existences of many diabetes management programmes as only 6% of those surveyed were enrolled is such a programme. This finding calls for a further in-depth examination of appropriate education in Costa Rica.

Many respondents struggled overall with the management of their diabetic condition, with 62% stating that the biggest challenge was that it was too hard to eat the right things. In addition, the long wait times for appointments, the high cost of examinations, and the lack of proximity of services were challenges. Transportation and not being able to drive also impacted the ability to attend appointments for general diabetes management.

Awareness of the complications associated with diabetes was extremely high with some 43% of respondents most concerned about vision loss followed by amputation. Only 14% had no complications, so vision loss, neuropathy, kidney disease, cardiovascular disease or stroke, and foot ulcers were experienced by the vast majority.

Knowing that diabetic-related vision loss is preventable and addressing barriers to eye screening is an important policy issue. It was notable that 58% of respondents had received an eye exam. However, there remained many barriers including long wait times, high costs of exams, proximity of clinics as well as the challenge of complicated referral pathways.

Evidence shows that the relationship between the patient and the health care professional is critical to ensure realistic and optimal patient outcomes. Forty-three percent of respondents stated that eye complications were discussed with their health care professional at every visit.

Concerning are the myths and perceptions around vision changes, with 43% thinking that vision problems were a normal part of ageing and 4% making no special effort to take a preventative approach to their eye health.

Almost all those diagnosed with DED or DME said that their vision was affected, which in turn affected their health, lifestyle, and life choices with many mentioning difficulties in travelling, undertaking household responsibilities (such as cooking or cleaning), and working or keeping a job.

Further validating the impact that vision loss has on life and lifestyle over half of those with DED and DME had physically and mentally unhealthy days. A proactive approach to prevent further vision loss rather than only receiving treatment when their vision deteriorates was preferred by all those with DME.

Patient education is very much at the heart of a proactive approach so it was surprising to find that many health care professionals did not have access to written information about diabetes related to eye complications. Only 50% of providers, including 60% of ophthalmologists, had written protocols for the management of diabetes while an alarming 40% of providers and ophthalmologists did not have any protocols on the management of diabetes-related vision issues available.

Recommendations for the timing of the initial eye exam for persons with diabetes varied depending upon the type of diabetes and the provider. For patients with type 1 diabetes, 57% of all providers reported that the initial eye exam should occur at the time of diagnosis of diabetes. For patients with type 2 diabetes, all providers recommended an eye exam at time of diagnosis.

Certain factors influenced the referral process the main being diabetes duration, the presence of comorbidities such as hypertension, high glucose levels, and a patient's ability to adhere to recommendations. All ophthalmologists viewed late diagnosis as the greatest challenge for improving patient outcomes in DED.

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

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

References and Acknowledgement

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

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

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

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	81 (100.0%)
Respondents aged 18 or over	80 (98.8%)
Respondents with diabetes	78 (96.3%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	81 (100.0%)
Included in Diabetic Analysis Set	74 (91.4%)
Excluded from Diabetic Analysis Set	7 (8.6%)
Reasons for exclusion from diabetic analysis set	.
Under 18 years of age	1
Not diagnosed with diabetes	2
Gestational diabetes only	4

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	74 (100.0%)
World Bank Income Group: Upper-middle income	74 (100.0%)
Persons with diabetic eye disease (DED)	24 (32.4%)
Persons with diabetic macular edema (DME)	8 (10.8%)
Persons with Type I diabetes	10 (13.5%)
Persons with Type II diabetes	10 (13.5%)
Persons not seeing health care professional for diabetes	1 (1.4%)
Persons seeing health care professional for diabetes	72 (97.3%)
Persons with eye disease & not received treatment	1 (1.4%)
Persons with eye disease & received treatment	25 (33.8%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	10 (13.5)
	Type II	10 (13.5)
	Don't know/Not sure	54 (73.0)
	Total Valid Response	74 (100.0)

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	1 (1.4)
	1 - 5 years ago	24 (32.9)
	6 - 10 years ago	11 (15.1)
	11 - 15 years ago	9 (12.3)
	16 - 20 years ago	12 (16.4)
	21 years ago or longer	16 (21.9)
	Total Valid Response	73 (100.0)
	Total missing	1

Table 2.3.1

Question	Response	Number of Respondents (%)
Do you see a health care professional for your diabetes?	Yes	72 (98.6)
	No	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
What kind of health care professional?	General/Family Doctor	56 (77.8)
	Diabetes Specialist	16 (22.2)
	Total Valid Response	72 (100.0)
	Total missing	2

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	56
	Mean	3.7
	SD	0.9
	Median	4.0
	Min	1
	Max	7
Diabetes Specialist	Total valid numeric response (n)	16
	Mean	3.6
	SD	1.0
	Median	4.0
	Min	2
	Max	6

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	70 (95.9%)
	Health educator	19 (26.0%)
	Nutritionist or dietitian	15 (20.5%)
	Diabetes organization or other health organization	4 (5.5%)
	Family/Friends/Neighbors	14 (19.2%)
	TV/Radio/Newspaper/Magazines	14 (19.2%)
	Internet	7 (9.6%)
	Pharmacist	5 (6.8%)
	None of the above	3 (4.1%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	41 (56.2%)

Question	Response	Number of Respondents (%)
	Oral medicine	58 (79.5%)
	Exercise	24 (32.9%)
	Insulin	44 (60.3%)
	Natural/Herbal medicine	15 (20.5%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	4 (5.5)
	No	69 (94.5)
	Total Valid Response	73 (100.0)
	Total missing	1
Who sponsors the programme?	Hospital support program	1 (25.0)
	Clinic support program	1 (25.0)
	Patient organization support program	2 (50.0)
	Total Valid Response	4 (100.0)
	Total missing	70
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	2 (50.0)
	No	2 (50.0)
	Total Valid Response	4 (100.0)
	Total missing	70

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	72 (98.6%)
	Less than 6 months	65 (89.0%)

Test	Response	Number of Respondents (%)
	6 - 12 months	5 (6.8%)
	Greater than 12 months	2 (2.7%)
	Total valid response	72 (98.6%)
	Total missing	2
	No	1 (1.4%)
	Total valid response	73 (100.0%)
	Total missing	1
Urine check	Yes	71 (97.3%)
	Less than 6 months	66 (90.4%)
	6 - 12 months	4 (5.5%)
	Greater than 12 months	1 (1.4%)
	Total valid response	71 (97.3%)
	Total missing	3
	No	2 (2.7%)
	Total valid response	73 (100.0%)
	Total missing	1
Weight check	Yes	70 (95.9%)
	Less than 6 months	65 (89.0%)
	6 - 12 months	4 (5.5%)
	Greater than 12 months	1 (1.4%)
	Total valid response	70 (95.9%)
	Total missing	4
	No	3 (4.1%)
	Total valid response	73 (100.0%)
	Total missing	1
Blood pressure check	Yes	73 (100.0%)
	Less than 6 months	67 (91.8%)
	6 - 12 months	5 (6.8%)
	Greater than 12 months	1 (1.4%)
	Total valid response	73 (100.0%)

Test	Response	Number of Respondents (%)
	Total missing	1
	Total valid response	73 (100.0%)
	Total missing	1
Foot check	Yes	59 (80.8%)
	Less than 6 months	53 (72.6%)
	6 - 12 months	5 (6.8%)
	Greater than 12 months	1 (1.4%)
	Total valid response	59 (80.8%)
	Total missing	15
	No	14 (19.2%)
	Total valid response	73 (100.0%)
	Total missing	1
Eye check	Yes	70 (95.9%)
	Less than 6 months	55 (75.3%)
	6 - 12 months	14 (19.2%)
	Greater than 12 months	1 (1.4%)
	Total valid response	70 (95.9%)
	Total missing	4
	No	3 (4.1%)
	Total valid response	73 (100.0%)
	Total missing	1

Table 2.8

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	15 (20.5%)
	Well	42 (57.5%)
	Not very well	12 (16.4%)
	Not well at all	3 (4.1%)
	Don't know/Not sure	1 (1.4%)

Question	Response	Number of Respondents (%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	9 (12.3%)
	Travel to my regular doctor or specialist is difficult	24 (32.9%)
	Long wait time for an appointment to see my doctor or specialist	19 (26.0%)
	Health services needed are not available	12 (16.4%)
	Don't know enough about diabetes	24 (32.9%)
	Too hard to eat the right things	45 (61.6%)
	Too many other things to do	23 (31.5%)
	Stigma or discrimination because of diabetes	9 (12.3%)
	Don't want to think about having diabetes	17 (23.3%)
	Other	2 (2.7%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.10

Question	Response	Number of Respondents (%)
Which of the following services currently help you better manage your diabetes?	Free or low cost medicines or monitoring materials	70 (95.9%)
	Support groups	4 (5.5%)
	Support from family or friends	44 (60.3%)
	Health education and information	22 (30.1%)
	Mobile services (services that travel to or near your home)	4 (5.5%)

Question	Response	Number of Respondents (%)
	Coordination of healthcare and services by a professional	7 (9.6%)
	Emergency helpline	5 (6.8%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.11

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	69 (94.5%)
	Foot ulcers	68 (93.2%)
	Increased risk of broken bones or fractures	42 (57.5%)
	Loss of feeling in hands or toes (neuropathy)	64 (87.7%)
	Vision loss	72 (98.6%)
	Irritable bowel disease	42 (57.5%)
	Kidney disease	59 (80.8%)
	Cardiovascular disease/Stroke	53 (72.6%)
	Other	2 (2.7%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.12

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	29 (39.7)
	Foot ulcers	1 (1.4)
	Increased risk of broken bones or fractures	1 (1.4)
	Loss of feeling in hands or toes (neuropathy)	4 (5.5)
	Vision loss	31 (42.5)

Question	Response	Number of Respondents (%)
	Kidney disease	2 (2.7)
	Cardiovascular disease/Stroke	1 (1.4)
	Don't know/Not sure	1 (1.4)
	None	3 (4.1)
	Total Valid Response	73 (100.0)
	Total missing	1

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	5 (6.8%)
	Foot ulcers	7 (9.6%)
	Broken bones or fractures	9 (12.3%)
	Loss of feeling in hands or toes (neuropathy)	29 (39.7%)
	Vision loss	59 (80.8%)
	Irritable bowel disease	13 (17.8%)
	Kidney disease	15 (20.5%)
	Cardiovascular disease/Stroke	13 (17.8%)
	Don't know/Not sure	1 (1.4%)
	None	10 (13.7%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.14

Question	Response	Number of Respondents (%)
How often do you discuss the possibility of eye complications with your health care professional?	Every visit	31 (42.5%)
	Multiple times per year	13 (17.8%)
	Once per year	9 (12.3%)
	Only when symptoms arise	17 (23.3%)

Question	Response	Number of Respondents (%)
	Never	3 (4.1%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.15

Question	Response	Number of Respondents (%)
Which of the following best describes your attitude to vision issues?	I think that vision problems are a normal part of ageing	31 (42.5%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	56 (76.7%)
	I do not make any special effort to prevent vision problems	3 (4.1%)
	Total Valid Response	73 (100.0%)
	Total missing	1

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	64 (87.7)
	Public - Private	5 (6.8)
	Private	4 (5.5)
	Total Valid Response	73 (100.0)
	Total missing	1

Table 2.17

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
General doctor visits (e.g. primary care doctor)	Care is free	13 (17.8)
	Insurance pays total cost	56 (76.7)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (1.4)

Question	Response	Number of Respondents (%)
	Out-of-pocket only (pay cash for all care)	2 (2.7)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	12 (16.4)
	Insurance pays total cost	44 (60.3)
	Insurance and out-of-pocket/cash (e.g. co-pays)	5 (6.8)
	Out-of-pocket only (pay cash for all care)	11 (15.1)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Medicines	Care is free	12 (16.4)
	Insurance pays total cost	45 (61.6)
	Insurance and out-of-pocket/cash (e.g. co-pays)	12 (16.4)
	Out-of-pocket only (pay cash for all care)	3 (4.1)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Medical supplies (e.g. blood glucose meter/strips)	Care is free	12 (16.4)
	Insurance pays total cost	50 (68.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	5 (6.8)
	Out-of-pocket only (pay cash for all care)	4 (5.5)
	Do not use service	1 (1.4)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Procedures	Care is free	12 (16.4)

Question	Response	Number of Respondents (%)
	Insurance pays total cost	54 (74.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	4 (5.5)
	Out-of-pocket only (pay cash for all care)	1 (1.4)
	Do not use service	1 (1.4)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Tests/screenings	Care is free	13 (17.8)
	Insurance pays total cost	52 (71.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	6 (8.2)
	Out-of-pocket only (pay cash for all care)	1 (1.4)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Health education	Care is free	13 (17.8)
	Insurance pays total cost	56 (76.7)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (1.4)
	Out-of-pocket only (pay cash for all care)	2 (2.7)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)
	Total missing	1
Counseling	Care is free	13 (17.8)
	Insurance pays total cost	56 (76.7)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (1.4)
	Out-of-pocket only (pay cash for all care)	2 (2.7)
	Don't know/Not Sure	1 (1.4)
	Total Valid Response	73 (100.0)

Question	Response	Number of Respondents (%)
	Total missing	1

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	2 (2.8%)
	No	70 (97.2%)
	Total valid response	72 (100.0%)
	Total missing	2

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	42 (58.3%)
	No	30 (41.7%)
	Total valid response	72 (100.0%)
	Total missing	2
How long ago was your last eye exam?	Within the last year	39 (92.9%)
	More than 1 year ago but less than 2 years	3 (7.1%)
	Total valid response	42 (100.0%)
	Total missing	32
Who did the last exam?	General/Family practitioner	2 (4.8%)
	Eye doctor/Eye clinic	40 (95.2%)
	Total valid response	42 (100.0%)
	Total missing	32

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	68 (94.4%)

Question	Response	Number of Respondents (%)
	No	4 (5.6%)
	Total valid response	72 (100.0%)
	Total missing	2

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	54 (75.0%)
	Every two years	1 (1.4%)
	Only when symptoms occur	2 (2.8%)
	Never	2 (2.8%)
	Don't know/Not sure	13 (18.1%)
	Total valid response	72 (100.0%)
	Total missing	2

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	They are expensive	41 (56.9%)
	Eye exams are not available near my home	34 (47.2%)
	Long wait time for appointment	45 (62.5%)
	Long wait time on the day of the visit	31 (43.1%)
	Referral process is complicated or takes too long	31 (43.1%)
	Recommended treatments for eye problems are not available	18 (25.0%)
	Don't know much about my condition	27 (37.5%)
	Fear of treatment/results	16 (22.2%)
	Burden on my family/friends	15 (20.8%)

Question	Response	Number of Respondents (%)
	Limited access to diabetes specialists	21 (29.2%)
	I'm not likely to have eye complications	2 (2.8%)
	Too many other things to do or worry about	19 (26.4%)
	Clinics are too small or lack necessary equipment/staff	26 (36.1%)
	Other	4 (5.6%)
	Total valid response	72 (100.0%)
	Total missing	2

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	26 (36.1%)
	No	46 (63.9%)
	Total valid response	72 (100.0%)
	Total missing	2
Has your diabetic eye disease affected your vision?	Yes, slightly	9 (34.6%)
	Yes, significantly	15 (57.7%)
	No	2 (7.7%)
	Total valid response	26 (100.0%)
	Total missing	48
Have vision issues caused you to have difficulty with any of the following?	Traveling	19 (79.2%)
	Household responsibilities, such as cooking or cleaning	12 (50.0%)
	Social interactions with family/friends	8 (33.3%)
	Leisure activities/exercise	7 (29.2%)
	Work or keeping a job	10 (41.7%)
	Managing my diabetes	8 (33.3%)
	None	2 (8.3%)
	Driving (a car/vehicle)	5 (20.8%)

Question	Response	Number of Respondents (%)
	Total valid response	24 (100.0%)
	Total missing	50

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	25 (96.2%)
	No	1 (3.8%)
	Total valid response	26 (100.0%)
	Total missing	48
What treatment did you receive?	Laser	17 (68.0%)
	Injection in the eye (Anti-VEGF)	10 (40.0%)
	Surgery	17 (68.0%)
	Total valid response	25 (100.0%)
	Total missing	49
Did you complete the treatment?	Yes	18 (72.0%)
	No	5 (20.0%)
	Still receiving treatment	2 (8.0%)
	Total valid response	25 (100.0%)
	Total missing	49
Do you feel that the treatment worked?	Yes, and vision improved	14 (70.0%)
	Yes, but vision stayed the same	3 (15.0%)
	No	2 (10.0%)
	Still waiting to know	1 (5.0%)
	Total valid response	20 (100.0%)
	Total missing	54
What is/are the reason(s) that you did not complete the treatment?	Other	5 (100.0%)
	Total valid response	5 (100.0%)
	Total missing	69

Question	Response	Number of Respondents (%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	Still waiting for treatment	1 (100.0%)
	Total valid response	1 (100.0%)
	Total missing	73

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	8 (11.1%)
	No	44 (61.1%)
	Don't know/Not sure	20 (27.8%)
	Total valid response	72 (100.0%)
	Total missing	2
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	6 (85.7%)
	Don't know/Not sure	1 (14.3%)
	Total valid response	7 (100.0%)
	Total missing	67

Table 3.9

Question	Response	Number of Respondents (%)
Have you received information about diabetic retinopathy or diabetic macular edema from any of the following sources?	Doctor/Nurse	16 (22.2%)
	Health educator	3 (4.2%)
	TV/Radio/Newspaper/Magazines	3 (4.2%)
	None of the above	54 (75.0%)
	Total valid response	72 (100.0%)
	Total missing	2

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	30 (41.7)

Question	Response	Number of Respondents (%)
	Male	42 (58.3)
	Total Valid Response	72 (100.0)
	Total missing	2
Please indicate your age	18 - 29	4 (5.4)
	40 - 49	3 (4.1)
	50 - 59	16 (21.6)
	60 - 69	24 (32.4)
	70 - 79	22 (29.7)
	80 - 89	5 (6.8)
	Total Valid Response	74 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	55 (76.4)
	Non-urban setting	17 (23.6)
	Total Valid Response	72 (100.0)
	Total missing	2

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Did not complete primary school	17 (23.6)
	Primary school	25 (34.7)
	Secondary school	17 (23.6)
	College/University	9 (12.5)
	Graduate or post-graduate	4 (5.6)
	Total valid response	72 (100.0)
	Total missing	2

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	16 (22.5)

Question	Response	Number of Respondents (%)
	Working without pay at home (e.g. housework, farming)	11 (15.5)
	Retired	15 (21.1)
	Student	1 (1.4)
	Not working	28 (39.4)
	Total Valid Response	71 (100.0)
	Total missing	3

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	5 (7.0%)
	Medical assistance	6 (8.5%)
	Pension assistance	28 (39.4%)
	None of the above	40 (56.3%)
	Total valid response	71 (100.0%)
	Total missing	3

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	19 (27.1)
	No	51 (72.9)
	Total Valid Response	70 (100.0)
	Total missing	4

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	23 (31.9)
	Education	7 (9.7)

Question	Response	Number of Respondents (%)
	Ethnicity	1 (1.4)
	Gender	2 (2.8)
	Income	19 (26.4)
	Language you speak	2 (2.8)
	Place of birth	1 (1.4)
	Place where you live	12 (16.7)
	Religion	1 (1.4)
	Sexual orientation	1 (1.4)
	None of the above	32 (44.4)
	Total valid response	72 (100.0)
	Total missing	2

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Food	7 (9.7)
	Money	8 (11.1)
	Health	44 (61.1)
	Family	7 (9.7)
	None of the above	6 (8.3)
	Total Valid Response	72 (100.0)
	Total missing	2

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Excellent	3 (4.2%)
	Very good	11 (15.3%)
	Good	21 (29.2%)

Question	Response	Number of Respondents (%)
	Total good health	35 (48.6%)
	Fair	34 (47.2%)
	Poor	3 (4.2%)
	Fair or poor health	37 (51.4%)
	Total valid response	72 (100.0%)
	Total missing	2

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	34 (47.9%)
	1-5 unhealthy days	10 (14.1%)
	6-10 unhealthy days	5 (7.0%)
	11-20 unhealthy days	5 (7.0%)
	21-30 unhealthy days	14 (19.7%)
	No unhealthy days	37 (52.1%)
	Total valid response	71 (100.0%)
	Total missing	3

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	33 (47.1%)
	1-5 unhealthy days	14 (20.0%)
	6-10 unhealthy days	5 (7.1%)
	11-20 unhealthy days	4 (5.7%)
	21-30 unhealthy	10 (14.3%)

Question	Response	Number of Respondents (%)
	days	
	No unhealthy days	37 (52.9%)
	Total valid response	70 (100.0%)
	Total missing	4

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	42 (59.2%)
	1-5 unhealthy days	11 (15.5%)
	6-10 unhealthy days	7 (9.9%)
	11-20 unhealthy days	6 (8.5%)
	21-30 unhealthy days	18 (25.4%)
	No unhealthy days	29 (40.8%)
	Total valid response	71 (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	35 (81.4%)
	1-5 unhealthy days	10 (23.3%)
	6-10 unhealthy days	4 (9.3%)
	11-20 unhealthy days	9 (20.9%)
	21-30 unhealthy days	12 (27.9%)

Question	Response	Number of Respondents (%)
	No unhealthy days	8 (18.6%)
	Total valid response	43 (100.0%)
	Total missing	31

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	45 (62.5%)
	No	27 (37.5%)
	Total valid response	72 (100.0%)
	Total missing	2
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Yes	8 (18.2%)
	No	36 (81.8%)
	Total valid response	44 (100.0%)
	Total missing	30
b) Back or neck problem	Yes	15 (34.9%)
	No	28 (65.1%)
	Total valid response	43 (100.0%)
	Total missing	31
c) Fractures, bone/joint injury	Yes	11 (25.6%)
	No	32 (74.4%)
	Total valid response	43 (100.0%)
	Total missing	31
d) Walking problem	Yes	17 (38.6%)
	No	27 (61.4%)
	Total valid response	44 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	30
e) Lung/breathing problem	Yes	9 (20.9%)
	No	34 (79.1%)
	Total valid response	43 (100.0%)
	Total missing	31
f) Hearing problem	Yes	12 (27.3%)
	No	32 (72.7%)
	Total valid response	44 (100.0%)
	Total missing	30
g) Eye/vision problem	Yes	42 (95.5%)
	No	2 (4.5%)
	Total valid response	44 (100.0%)
	Total missing	30
h) Heart problem	Yes	7 (15.9%)
	No	37 (84.1%)
	Total valid response	44 (100.0%)
	Total missing	30
i) Stroke problem	Yes	2 (4.5%)
	No	42 (95.5%)
	Total valid response	44 (100.0%)
	Total missing	30
j) Hypertension/high blood pressure	Yes	25 (56.8%)
	No	19 (43.2%)
	Total valid response	44 (100.0%)
	Total missing	30
k) Diabetes	Yes	36 (80.0%)
	No	9 (20.0%)
	Total valid response	45 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	29
l) Cancer	No	44 (100.0%)
	Total valid response	44 (100.0%)
	Total missing	30
m) Mental or emotional health	Yes	2 (4.5%)
	No	42 (95.5%)
	Total valid response	44 (100.0%)
	Total missing	30

PT 1.2

Analysis Sets	Number of Respondents (%)
All valid respondents	12 (100.0%)
Included in Provider Analysis Set (PAS)	12 (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	12
Included in the Eye Care Professional Set (Eye Specialist)	6 (50.0%)
Excluded in the Eye Care Professional Set (Eye Specialist)	6 (50.0%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	6
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	12 (100.0%)
Primary Care Provider	2 (16.7%)
Diabetes Specialist Provider	4 (33.3%)
Eye Care Professional	6 (50.0%)

Subgroups	Number of Respondents (%)
Ophthalmologist	6 (50.0%)

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

PT 1.4

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your specialty?	General primary care/Family practitioner	2 (100.0%)	0 (0.0%)	0 (0.0%)	2 (16.7%)
	Diabetes specialist	0 (0.0%)	4 (100.0%)	0 (0.0%)	4 (33.3%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	4 (66.7%)	4 (33.3%)
	Optometrist	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Retinal specialist	0 (0.0%)	0 (0.0%)	3 (50.0%)	3 (25.0%)
	Nurse	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Health educator	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	None of the above	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	2 (100.0%)	4 (100.0%)	6 (100.0%)	12 (100.0%)
	Total missing	0	0	0	0

PT 1.5

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
How long have you been practicing in this profession?	Total valid response (n)	2	4	6	12
	Mean	20.0	27.8	7.0	16.1
	SD	0.0	7.4	7.3	11.7
	Median	20.0	30.5	4.5	18.5
	Min.	20	17	1	1
	Max.	20	33	20	33
	Total missing	0	0	0	0

PT 2.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your main practice setting?	Diabetes clinic/practice	0 (0.0%)	3 (75.0%)	0 (0.0%)	3 (30.0%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	4 (80.0%)	4 (40.0%)
	General medical clinic/practice	1 (100.0%)	1 (25.0%)	0 (0.0%)	2 (20.0%)
	Hospital	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (10.0%)
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Non-urban setting	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	0 (0.0%)	1 (25.0%)	3 (60.0%)	4 (40.0%)
	Private	1 (100.0%)	3 (75.0%)	0 (0.0%)	4 (40.0%)
	Non profit	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Combined/mixed	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	Total Valid	1 (100.0%)	4 (100.0%)	5 (100.0%)	10

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

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	0 (0.0%)	3 (75.0%)	2 (40.0%)	5 (50.0%)
	Yes, limited by age	0 (0.0%)	1 (25.0%)	1 (20.0%)	2 (20.0%)
	Yes, limited to persons with health insurance	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	Yes, limited to low income or uninsured persons	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

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	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (10.0%)
	More than 1 week but less than 1 month	0 (0.0%)	1 (25.0%)	1 (20.0%)	2 (20.0%)
	More than 1 month but less than 2 months	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	More than 2 months but	0 (0.0%)	0 (0.0%)	1 (20.0%)	1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	less than 3 months				(10.0%)
	More than 3 months but less than 6 months	0 (0.0%)	2 (50.0%)	0 (0.0%)	2 (20.0%)
	Other	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (10.0%)
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.6

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
On average, how many patients do you see per week in your main practice [n patients]	Total valid response (n)	1	4	5	10
	Mean	100	72.5	65.6	71.8
	SD	.	33	20.7	25.8
	Median	100	60	55	62.5
	Min.	100	50	50	50
	Max.	100	120	100	120
	Total missing	1	0	1	2
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	1	4	5	10
	Mean	60	40	49	46.5
	SD	.	14.1	21.9	18
	Median	60	45	50	50
	Min.	60	20	20	20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Max.	60	50	80	80
	Total missing	1	0	1	2

PT 2.7

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, how do patients pay for the care and services that you provide?	Don't pay	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (10.0%)
	Pay out-of-pocket (full fees)	1 (100.0%)	3 (75.0%)	0 (0.0%)	4 (40.0%)
	Pay through insurance	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	Patient pays some, insurance pays some	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (10.0%)
	Other	0 (0.0%)	1 (25.0%)	1 (20.0%)	2 (20.0%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.8

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In addition to your main practice, do you work in another practice setting?	Yes		3 (75.0%)	4 (80.0%)	7 (70.0%)
	No	1 (100.0%)	1 (25.0%)	1 (20.0%)	3 (30.0%)
	Total valid	1	4 (100.0%)	5 (100.0%)	10

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	response	(100.0%)			(100.0%)
	Total missing	1		1	2
In which other practice setting(s) do you work?	Hospital		1 (50.0%)	1 (25.0%)	2 (33.3%)
	General medical clinic/practice			1 (25.0%)	1 (16.7%)
	Eye clinic/practice			2 (50.0%)	2 (33.3%)
	Other		1 (50.0%)	1 (25.0%)	2 (33.3%)
	Total valid response		2 (100.0%)	4 (100.0%)	6 (100.0%)
	Total missing	2	2	2	6
In which sector(s) is(are) the practice(s)?	Government		1 (33.3%)		1 (14.3%)
	Private		1 (33.3%)	4 (100.0%)	5 (71.4%)
	Combined/mixed		1 (33.3%)		1 (14.3%)
	Total valid response		3 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	2	1	2	5
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes		2 (66.7%)	1 (25.0%)	3 (42.9%)
	No		1 (33.3%)	3 (75.0%)	4 (57.1%)
	Total valid response		3 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	2	1	2	5

PT 2.9

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes		1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
		Total valid numeric response (n)	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
		Mean	24.0	4.3	3.2	5.7
		SD		1.3	0.8	6.5
		Median	24.0	4.0	3.0	4.0
		Min	24	3	2	2
		Max	24	6	4	24
		Total missing	1	0	1	2
	Total valid response		1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing		1		1	2
HbA1c	Yes			4 (100.0%)	4 (80.0%)	8 (88.9%)
		Total valid numeric response (n)	0	4 (100.0%)	4 (80.0%)	8 (88.9%)
		Mean		3.8	2.5	3.1
		SD		0.5	1.3	1.1
		Median		4.0	2.5	3.5
		Min		3	1	1
		Max		4	4	4
		Total missing	2	0	2	4
	No				1 (20.0%)	1 (11.1%)
	Total valid response			4 (100.0%)	5 (100.0%)	9 (100.0%)
	Total missing		2		1	3
Urine check	Yes			3 (75.0%)	2 (40.0%)	5

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
						(55.6%)
		Total valid numeric response (n)	0	3 (75.0%)	2 (40.0%)	5 (55.6%)
		Mean		3.0	2.5	2.8
		SD		1.7	2.1	1.6
		Median		4.0	2.5	4.0
		Min		1	1	1
		Max		4	4	4
		Total missing	2	1	4	7
	No			1 (25.0%)	3 (60.0%)	4 (44.4%)
	Total valid response			4 (100.0%)	5 (100.0%)	9 (100.0%)
	Total missing		2		1	3
Weight check	Yes		1 (100.0%)	4 (100.0%)	1 (25.0%)	6 (66.7%)
		Total valid numeric response (n)	1 (100.0%)	4 (100.0%)	1 (25.0%)	6 (66.7%)
		Mean	12.0	3.8	4.0	5.2
		SD		0.5		3.4
		Median	12.0	4.0	4.0	4.0
		Min	12	3	4	3
		Max	12	4	4	12
		Total missing	1	0	5	6
	No				3 (75.0%)	3 (33.3%)
	Total valid response		1 (100.0%)	4 (100.0%)	4 (100.0%)	9 (100.0%)
	Total missing		1		2	3

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood pressure check	Yes		1 (100.0%)	4 (100.0%)	3 (60.0%)	8 (80.0%)
		Total valid numeric response (n)	1 (100.0%)	4 (100.0%)	3 (60.0%)	8 (80.0%)
		Mean	24.0	4.3	3.0	6.3
		SD		1.3	1.0	7.3
		Median	24.0	4.0	3.0	4.0
		Min	24	3	2	2
		Max	24	6	4	24
		Total missing	1	0	3	4
	No				2 (40.0%)	2 (20.0%)
	Total valid response		1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing		1		1	2
Foot check	Yes			4 (100.0%)	1 (20.0%)	5 (55.6%)
		Total valid numeric response (n)	0	4 (100.0%)	1 (20.0%)	5 (55.6%)
		Mean		2.0	4.0	2.4
		SD		1.4		1.5
		Median		1.5	4.0	2.0
		Min		1	4	1
		Max		4	4	4
		Total missing	2	0	5	7
	No				4 (80.0%)	4 (44.4%)
	Total valid response			4 (100.0%)	5 (100.0%)	9 (100.0%)
	Total		2		1	3

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	missing					
Eye examination - Un-dilated	Yes			2 (66.7%)	2 (40.0%)	4 (50.0%)
		Total valid numeric response (n)	0	2 (66.7%)	2 (40.0%)	4 (50.0%)
		Mean		3.5	4.0	3.8
		SD		0.7	0.0	0.5
		Median		3.5	4.0	4.0
		Min		3	4	3
		Max		4	4	4
		Total missing	2	2	4	8
	No			1 (33.3%)	3 (60.0%)	4 (50.0%)
	Total valid response			3 (100.0%)	5 (100.0%)	8 (100.0%)
	Total missing		2	1	1	4
Eye examination - Optical Coherence Tomography	Yes			1 (33.3%)	5 (100.0%)	6 (75.0%)
		Total valid numeric response (n)	0	1 (33.3%)	5 (100.0%)	6 (75.0%)
		Mean		0.0	1.6	1.3
		SD			0.5	0.8
		Median		0.0	2.0	1.5
		Min		0	1	0
		Max		0	2	2
		Total missing	2	3	1	6
	No			2 (66.7%)		2 (25.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response			3 (100.0%)	5 (100.0%)	8 (100.0%)
	Total missing		2	1	1	4
Eye examination - Fundoscopy	Yes			3 (75.0%)	5 (100.0%)	8 (88.9%)
		Total valid numeric response (n)	0	3 (75.0%)	5 (100.0%)	8 (88.9%)
		Mean		4.0	2.8	3.3
		SD		1.0	1.3	1.3
		Median		4.0	3.0	3.5
		Min		3	1	1
		Max		5	4	5
		Total missing	2	1	1	4
	No			1 (25.0%)		1 (11.1%)
	Total valid response			4 (100.0%)	5 (100.0%)	9 (100.0%)
	Total missing		2		1	3
Eye examination - Fluorescein Angiography	Yes			1 (33.3%)	5 (100.0%)	6 (75.0%)
		Total valid numeric response (n)	0	1 (33.3%)	5 (100.0%)	6 (75.0%)
		Mean		0.0	1.4	1.2
		SD			0.5	0.8
		Median		0.0	1.0	1.0
		Min		0	1	0
		Max		0	2	2
		Total	2	3	1	6

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		missing				
	No			2 (66.7%)		2 (25.0%)
	Total valid response			3 (100.0%)	5 (100.0%)	8 (100.0%)
	Total missing		2	1	1	4
Eye examination - Lipid check	Yes			4 (100.0%)	3 (60.0%)	7 (77.8%)
		Total valid numeric response (n)	0	4 (100.0%)	3 (60.0%)	7 (77.8%)
		Mean		0.8	2.0	1.3
		SD		0.5	1.7	1.3
		Median		1.0	1.0	1.0
		Min		0	1	0
		Max		1	4	4
		Total missing	2	0	3	5
	No				2 (40.0%)	2 (22.2%)
	Total valid response			4 (100.0%)	5 (100.0%)	9 (100.0%)
	Total missing		2		1	3

PT 2.10

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, what topics do you cover during a routine visit with a patient who has diabetes?	Diabetes management and monitoring	1 (100.0%)	4 (100.0%)	3 (60.0%)	8 (80.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Diet/nutrition	0 (0.0%)	4 (100.0%)	4 (80.0%)	8 (80.0%)
	Exercise/physical activity	0 (0.0%)	4 (100.0%)	3 (60.0%)	7 (70.0%)
	Medicines	1 (100.0%)	4 (100.0%)	2 (40.0%)	7 (70.0%)
	Foot care and inspection	0 (0.0%)	2 (50.0%)	1 (20.0%)	3 (30.0%)
	Blood pressure	1 (100.0%)	4 (100.0%)	3 (60.0%)	8 (80.0%)
	Eye care and exams	0 (0.0%)	3 (75.0%)	5 (100.0%)	8 (80.0%)
	Lipid check	1 (100.0%)	3 (75.0%)	3 (60.0%)	7 (70.0%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.11

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is there written information about diabetes available for patients in your main practice?	Yes, but information on eye complications is not sufficient	0 (0.0%)	2 (50.0%)	4 (80.0%)	6 (60.0%)
	Yes, but no information on eye complications is included	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (10.0%)
	No written information is available for patients	1 (100.0%)	1 (25.0%)	0 (0.0%)	2 (20.0%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (10.0%)
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing	1	0	1	2

PT 2.12

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines available in your main practice for the management of diabetes?	Yes, available and used by staff	0 (0.0%)	2 (50.0%)	3 (60.0%)	5 (50.0%)
	Yes, available but not used by staff	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	Not available	1 (100.0%)	2 (50.0%)	0 (0.0%)	3 (30.0%)
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.13

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (20.0%)
	Yes, available but not used by staff	0 (0.0%)	3 (75.0%)	1 (20.0%)	4 (40.0%)
	Not available	1 (100.0%)	1 (25.0%)	2 (40.0%)	4 (40.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	1 (100.0%)	4 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing	1	0	1	2

PT 2.14

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type I?	After a predetermined number of years (numeric response) (n)	0	1 (33.3%)	2 (50.0%)	3 (42.9%)
	Mean		5.0	5.0	5.0
	SD			0.0	0.0
	Median		5.0	5.0	5.0
	Min		5	5	5
	Max		5	5	5
	After a predetermined age (numeric response) (n)	0	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	As soon as they are diagnosed		2 (66.7%)	2 (50.0%)	4 (57.1%)
	Total valid response		3 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	2	1	2	5
What is the protocol in your main practice for	After a predetermined number of years	0	0 (0.0%)	0 (0.0%)	0 (0.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
timing of initial eye exams for persons with diabetes - Type II?	(numeric response) (n)				
	Mean				
	SD				
	Median				
	Min				
	Max				
	After a predetermined age (numeric response) (n)	0	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	As soon as they are diagnosed		3 (100.0%)	4 (100.0%)	7 (100.0%)
	Total valid response		3 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	2	1	2	5

PT 2.15

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of follow-up eye examinations for persons with diabetes?	Once a year	0 (0.0%)	3 (75.0%)	3 (100.0%)	6 (85.7%)
	Every two years	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (14.3%)
	Total Valid Response	0	4 (100.0%)	3 (100.0%)	7 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing	2	0	3	5

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total valid response		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2		3	5
Where do you screen patients?	In clinic		4 (100.0%)	2 (66.7%)	6 (85.7%)
	Other			1 (33.3%)	1 (14.3%)
	Total valid response		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2		3	5

PT 2.17

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What patient characteristics influence your vision care and/or vision referrals?	Diabetes duration	0 (0.0%)	4 (100.0%)	2 (66.7%)	6 (85.7%)
	Patient's age	0 (0.0%)	2 (50.0%)	0 (0.0%)	2 (28.6%)
	Presence of comorbidities such as hypertension, etc.	0 (0.0%)	4 (100.0%)	2 (66.7%)	6 (85.7%)
	High glucose levels	0 (0.0%)	3 (75.0%)	2 (66.7%)	5 (71.4%)
	Ability or inability to pay	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (14.3%)
	Patient adherence to	0 (0.0%)	1 (25.0%)	1 (33.3%)	2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	recommendations				(28.6%)
	Not applicable	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)
	Total valid response	0	4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2	0	3	5

PT 2.18

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What are the major barriers to optimizing eye health faced by patients with diabetes in your main practice?	Cost of care	0 (0.0%)	2 (50.0%)	1 (33.3%)	3 (42.9%)
	Proximity to care	0 (0.0%)	0 (0.0%)	2 (66.7%)	2 (28.6%)
	Long wait time for appointment	0 (0.0%)	2 (50.0%)	3 (100.0%)	5 (71.4%)
	Referral process	0 (0.0%)	2 (50.0%)	2 (66.7%)	4 (57.1%)
	Lack of knowledge and/or awareness	0 (0.0%)	0 (0.0%)	2 (66.7%)	2 (28.6%)
	Patients fear of treatment/results	0 (0.0%)	0 (0.0%)	2 (66.7%)	2 (28.6%)
	Limited access to diabetes specialists	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)
	Limited access to eye specialists	0 (0.0%)	1 (25.0%)	3 (100.0%)	4 (57.1%)
	Patients feel eye complications are unlikely	0 (0.0%)	2 (50.0%)	0 (0.0%)	2 (28.6%)
	Patients feel eye exams are not important	0 (0.0%)	0 (0.0%)	3 (100.0%)	3 (42.9%)
	Patients have competing	0 (0.0%)	1 (25.0%)	1 (33.3%)	2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	responsibilities and priorities				(28.6%)
	Total valid response	0	4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2	0	3	5

PT 2.19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, are patients contacted with reminders for general follow-up appointments?	Yes	0 (0.0%)	3 (75.0%)	2 (66.7%)	5 (71.4%)
	No	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (14.3%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)
	Total Valid Response	0	4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2	0	3	5

PT 2.20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you share relevant patient information with other health care professionals involved in the patients care e.g. his or her general practitioner, ophthalmologist, podiastrist?	Yes	0 (0.0%)	3 (75.0%)	2 (66.7%)	5 (71.4%)
	No	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (14.3%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	0	4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2	0	3	5

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	30 - 39			2 (66.7%)	2 (28.6%)
	40 - 49		1 (25.0%)	1 (33.3%)	2 (28.6%)
	50 - 59		2 (50.0%)		2 (28.6%)
	60 - 69		1 (25.0%)		1 (14.3%)
	Total valid response		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2		3	5
What is your gender?	Female		2 (50.0%)	1 (33.3%)	3 (42.9%)
	Male		2 (50.0%)	2 (66.7%)	4 (57.1%)
	Total valid response		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2		3	5
What is your highest level of education completed?	Graduate or advanced degree (e.g. PhD, MD, etc)		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total valid response		4 (100.0%)	3 (100.0%)	7 (100.0%)
	Total missing	2		3	5

PT 4.1

Question	Response	Ophthalmologist

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	3
	Mean	48.3
	SD	32.5
	Median	50.0
	Min	15
	Max	80
	Total missing	3

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	3
	Mean	35.0
	SD	18.0
	Median	40.0
	Min	15
	Max	50
	Total missing	3

PT 4.3

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	More than 2 months but less than 3 months	1 (33.3%)
	More than 3 months but less than 6 months	1 (33.3%)
	Six or more months	1 (33.3%)
	Total Valid Response	3 (100.0%)
	Total missing	3

PT 4.4

Question	Response	Ophthalmologist
From the time a patient is screened, what is the average length of time he/she waits for diagnosis?	More than 2 months but less than 3 months	1 (33.3%)

Question	Response	Ophthalmologist
	There is not wait, diagnosis is given when screened	2 (66.7%)
	Total Valid Response	3 (100.0%)
	Total missing	3

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	2 (66.7%)
		Available locally	2 (66.7%)
		Available in practice	3 (100.0%)
		Total valid response	3 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	2.5
		SD	0.7
		Median	2.5
		Min	2
		Max	3
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	5.0
		SD	4.2
		Median	5.0
		Min	2
		Max	8
		Total valid response	2 (100.0%)
		Total missing	4

Type of Treatment	Question	Response/time	Ophthalmologist
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	1.5
		SD	0.7
		Median	1.5
		Min	1
		Max	2
		Total valid response	2 (100.0%)
		Total missing	4
Anti-VEGF therapies	Is the treatment available?	Available within country	2 (66.7%)
		Available locally	2 (66.7%)
		Available in practice	3 (100.0%)
		Total valid response	3 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	3.5
		SD	0.7
		Median	3.5
		Min	3
		Max	4
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	6.0
		SD	2.8
		Median	6.0
		Min	4

Type of Treatment	Question	Response/time	Ophthalmologist
		Max	8
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	4.5
		SD	0.7
		Median	4.5
		Min	4
		Max	5
		Total valid response	2 (100.0%)
		Total missing	4
Intravitreal steroid	Is the treatment available?	Available within country	1 (33.3%)
		Available locally	2 (66.7%)
		Available in practice	2 (66.7%)
		Total valid response	3 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	0 (0.0%)
		Mean	
		SD	
		Median	
		Min	
		Max	
		Not applicable	2 (100.0%)
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a first	Total valid numeric response (n)	0 (0.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
	treatment?(weeks)		
		Mean	
		SD	
		Median	
		Min	
		Max	
		Not applicable	2 (100.0%)
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	0 (0.0%)
		Mean	
		SD	
		Median	
		Min	
		Max	
		Not applicable	2 (100.0%)
		Total valid response	2 (100.0%)
		Total missing	4
Uncomplicated vitrectomy	Is the treatment available?	Available within country	2 (66.7%)
		Available locally	2 (66.7%)
		Available in practice	3 (100.0%)
		Total valid response	3 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	15.0
		SD	7.1
		Median	15.0

Type of Treatment	Question	Response/time	Ophthalmologist
		Min	10
		Max	20
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	15.0
		SD	7.1
		Median	15.0
		Min	10
		Max	20
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	7.0
		SD	4.2
		Median	7.0
		Min	4
		Max	10
		Total valid response	2 (100.0%)
		Total missing	4
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	2 (66.7%)
		Available locally	2 (66.7%)
		Available in practice	3 (100.0%)
		Total valid response	3 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a consultation	Total valid numeric response (n)	2 (100.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
	appointment? (weeks)		
		Mean	14.0
		SD	8.5
		Median	14.0
		Min	8
		Max	20
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	14.0
		SD	8.5
		Median	14.0
		Min	8
		Max	20
		Total valid response	2 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	2 (100.0%)
		Mean	6.0
		SD	2.8
		Median	6.0
		Min	4
		Max	8
		Total valid response	2 (100.0%)
		Total missing	4

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	3 (100.0%)

Question	Response	Ophthalmologist
	Total valid response	3 (100.0%)
	Total missing	3
Who administer it?	Total missing	6

PT 4.7

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	2 (66.7%)
	Patient's age	1 (33.3%)
	Presence of comorbidities such as hypertension, etc.	3 (100.0%)
	High glucose levels	2 (66.7%)
	Patient educational level	1 (33.3%)
	Patient adherence to recommendations	2 (66.7%)
	Total valid response	3 (100.0%)
	Total missing	3

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Both	3 (100.0%)
	Total Valid Response	3 (100.0%)
	Total missing	3

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy dilated	3 (100.0%)
	Retinal photo	1 (33.3%)
	Optical Coherence Tomography	3 (100.0%)
	Fluorescein Angiography	2 (66.7%)

Question	Response	Ophthalmologist
	Total valid response	3 (100.0%)
	Total missing	3

PT 4.10

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	When visual problems have already occurred	3 (100.0%)
	Total Valid Response	3 (100.0%)
	Total missing	3

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	3 (100.0%)
	Total valid response	3 (100.0%)
	Total missing	3
If yes, When was your last training?	Five or more years ago	1 (33.3%)
	Within the past year	2 (66.7%)
	Total valid response	3 (100.0%)
	Total missing	3

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	3 (100.0%)
	Total Valid Response	3 (100.0%)
	Total missing	3

PT 4.13

Question	Response	Ophthalmologist

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Health fairs for all	1 (33.3%)
	Health fairs for people with diabetes	2 (66.7%)
	At vision centers	1 (33.3%)
	Other	1 (33.3%)
	Total valid response	3 (100.0%)
	Total missing	3

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	1 (33.3%)
	Late diagnosis	3 (100.0%)
	Referral pathways	1 (33.3%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	3 (100.0%)
	No universal guidelines on referral/screening	1 (33.3%)
	No universal guidelines on how to treat	1 (33.3%)
	No universal guideline on when to treat	1 (33.3%)
	Government/insurance not able to cover patient costs	1 (33.3%)
	Multi-disciplinary team integration is poor	3 (100.0%)
	Ineffective screening services	3 (100.0%)
	Total valid response	3 (100.0%)
	Total missing	3

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Amputation	1 (2.4%)	3 (12.5%)	1 (12.5%)

Question	Response	Without DED (%)	With DED (%)	With DME (%)
	Broken bones or fractures	2 (4.9%)	5 (20.8%)	2 (25.0%)
	Cardiovascular disease/Stroke	8 (19.5%)	4 (16.7%)	1 (12.5%)
	Foot ulcers	4 (9.8%)	2 (8.3%)	1 (12.5%)
	Irritable bowel disease	3 (7.3%)	7 (29.2%)	3 (37.5%)
	Kidney disease	6 (14.6%)	6 (25.0%)	3 (37.5%)
	Loss of feeling in hands or toes (neuropathy)	12 (29.3%)	12 (50.0%)	5 (62.5%)
	Vision loss	27 (65.9%)	24 (100.0%)	8 (100.0%)
	None	10 (24.4%)	0 (0.0%)	0 (0.0%)
	Don't know/Not sure	1 (2.4%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	41 (100.0%)	24 (100.0%)	8 (100.0%)
	Total missing	1	0	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
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	22 (55.0%)	17 (70.8%)	6 (75.0%)
Impairment or health problem			
Eye/vision problem	20 (95.2%)	17 (100.0%)	5 (83.3%)
Diabetes	18 (81.8%)	14 (82.4%)	4 (66.7%)
Hypertension/high blood pressure	10 (47.6%)	11 (64.7%)	4 (66.7%)
Back or neck problem	7 (33.3%)	7 (43.8%)	1 (16.7%)
Walking problem	7 (33.3%)	10 (58.8%)	0 (0.0%)
Hearing problem	6 (28.6%)	5 (29.4%)	1 (16.7%)
Arthritis/rheumatism	4 (19.0%)	2 (11.8%)	2 (33.3%)
Heart problem	4 (19.0%)	3 (17.6%)	0 (0.0%)
Lung/breathing problem	3 (14.3%)	5 (29.4%)	1 (20.0%)
Fractures, bone/joint injury	2 (10.0%)	7 (41.2%)	2 (33.3%)

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Stroke problem	1 (4.8%)	1 (5.9%)	0 (0.0%)
Mental or emotional health	0 (0.0%)	2 (11.8%)	0 (0.0%)

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

EXP 3

Health Status	Without DED (%)	With DED (%)	With DME (%)
Self-rated health: Good	20 (50.0%)	12 (50.0%)	3 (37.5%)
Self-rated health: Poor	20 (50.0%)	12 (50.0%)	5 (62.5%)
Physically unhealthy days	16 (40.0%)	14 (60.9%)	4 (50.0%)
Mentally unhealthy days	17 (43.6%)	12 (52.2%)	4 (50.0%)
Unhealthy days	23 (57.5%)	15 (65.2%)	4 (50.0%)
Activity limitation days	17 (70.8%)	14 (93.3%)	4 (100.0%)

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

EXP 4

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	41 (56.2%)	9 (90.0%)	7 (77.8%)
	Oral medicine	58 (79.5%)	5 (50.0%)	7 (77.8%)
	Exercise	24 (32.9%)	6 (60.0%)	3 (33.3%)
	Insulin	44 (60.3%)	6 (60.0%)	9 (100.0%)
	Natural/Herbal medicine	15 (20.5%)	2 (20.0%)	2 (22.2%)

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	11 (27.5%)	5 (21.7%)	0 (0.0%)
	Working without pay at home (e.g. housework, farming)	6 (15.0%)	3 (13.0%)	2 (25.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Retired	6 (15.0%)	7 (30.4%)	2 (25.0%)
	Student	1 (2.5%)	0 (0.0%)	0 (0.0%)
	Not working	16 (40.0%)	8 (34.8%)	4 (50.0%)
	Total Valid Response	40 (100.0%)	23 (100.0%)	8 (100.0%)
	Total missing	2	1	0
Do you receive assistance from the government?	Income assistance	0 (0.0%)	3 (13.0%)	2 (25.0%)
	Medical assistance	3 (7.5%)	2 (8.7%)	1 (12.5%)
	Pension assistance	15 (37.5%)	11 (47.8%)	2 (25.0%)
	None of the above	25 (62.5%)	11 (47.8%)	4 (50.0%)
	Total valid response	40 (100.0%)	23 (100.0%)	8 (100.0%)
	Total missing	2	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	9 (22.5%)	8 (36.4%)	2 (25.0%)
	No	31 (77.5%)	14 (63.6%)	6 (75.0%)
	Total Valid Response	40 (100.0%)	22 (100.0%)	8 (100.0%)
	Total missing	2	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	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Student	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	2	0	0
Do you receive assistance from the	None of the	2 (100.0%)	0 (0.0%)	0 (0.0%)

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

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

EXP 5.3: Age group 40-59 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	6 (50.0%)	2 (28.6%)	0 (0.0%)
	Working without pay at home (e.g. housework, farming)	3 (25.0%)	1 (14.3%)	0 (0.0%)
	Retired	1 (8.3%)	2 (28.6%)	0 (0.0%)
	Not working	2 (16.7%)	2 (28.6%)	0 (0.0%)
	Total Valid Response	12 (100.0%)	7 (100.0%)	0 (0.0%)
Do you receive assistance from the government?	Income assistance	0 (0.0%)	1 (16.7%)	0 (0.0%)
	Pension assistance	1 (8.3%)	2 (33.3%)	0 (0.0%)
	None of the above	11 (91.7%)	4 (66.7%)	0 (0.0%)
	Total valid response	12 (100.0%)	6 (100.0%)	0
	Total missing	0	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	2 (16.7%)	3 (42.9%)	0 (0.0%)
	No	10 (83.3%)	4 (57.1%)	0 (0.0%)
	Total Valid Response	12 (100.0%)	7 (100.0%)	0 (0.0%)

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

NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".

EXP 5.4: Age group 60-79 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	4 (16.7%)	3 (23.1%)	0 (0.0%)
	Working without pay at home (e.g. housework, farming)	3 (12.5%)	1 (7.7%)	2 (25.0%)
	Retired	5 (20.8%)	4 (30.8%)	2 (25.0%)
	Not working	12 (50.0%)	5 (38.5%)	4 (50.0%)
	Total Valid Response	24 (100.0%)	13 (100.0%)	8 (100.0%)
	Total missing	0	1	0
Do you receive assistance from the government?	Income assistance	0 (0.0%)	2 (14.3%)	2 (25.0%)
	Medical assistance	3 (12.5%)	2 (14.3%)	1 (12.5%)
	Pension assistance	13 (54.2%)	8 (57.1%)	2 (25.0%)
	None of the above	11 (45.8%)	5 (35.7%)	4 (50.0%)
	Total valid response	24 (100.0%)	14 (100.0%)	8 (100.0%)
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	6 (25.0%)	4 (33.3%)	2 (25.0%)
	No	18 (75.0%)	8 (66.7%)	6 (75.0%)
	Total Valid Response	24 (100.0%)	12 (100.0%)	8 (100.0%)
	Total missing	0	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".

EXP 5.5: Age group 80+ years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working without pay at home (e.g. housework, farming)	0 (0.0%)	1 (33.3%)	0 (0.0%)
	Retired	0 (0.0%)	1 (33.3%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Not working	2 (100.0%)	1 (33.3%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	3 (100.0%)	0 (0.0%)
Do you receive assistance from the government?	Pension assistance	1 (50.0%)	1 (33.3%)	0 (0.0%)
	None of the above	1 (50.0%)	2 (66.7%)	0 (0.0%)
	Total valid response	2 (100.0%)	3 (100.0%)	0
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	0 (0.0%)	1 (33.3%)	0 (0.0%)
	No	2 (100.0%)	2 (66.7%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	3 (100.0%)	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		74 (100%)	10 (13.5%)	10 (13.5%)	24 (32.4%)	8 (10.8%)
Gender	Male	42 (58.3%)	6 (14.3%)	2 (4.8%)	11 (26.2%)	4 (9.5%)
	Female	30 (41.7%)	3 (10.0%)	7 (23.3%)	13 (43.3%)	4 (13.3%)
	Total Missing	2	1	1	0	0
Age	18-39 yrs	4 (5.4%)	2 (50.0%)	2 (50.0%)	0 (0.0%)	0 (0.0%)
	40-59 yrs	19 (25.7%)	2 (10.5%)	4 (21.1%)	7 (36.8%)	0 (0.0%)
	60-79 yrs	46 (62.2%)	6 (13.0%)	4 (8.7%)	14 (30.4%)	8 (17.4%)
	80 yrs and over	5 (6.8%)	0 (0.0%)	0 (0.0%)	3 (60.0%)	0 (0.0%)
Time since diagnosis	Within the last year	1 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 years ago	24 (32.9%)	3 (12.5%)	1 (4.2%)	3 (12.5%)	2 (8.3%)
	6 - 10 years	11 (15.1%)	1 (9.1%)	1 (9.1%)	4 (36.4%)	0 (0.0%)

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
	ago					
	11 - 15 years ago	9 (12.3%)	1 (11.1%)	2 (22.2%)	4 (44.4%)	1 (11.1%)
	16 - 20 years ago	12 (16.4%)	3 (25.0%)	2 (16.7%)	4 (33.3%)	1 (8.3%)
	21 years ago or longer	16 (21.9%)	2 (12.5%)	3 (18.8%)	9 (56.3%)	4 (25.0%)
	Total Missing	1	0	1	0	0
Control of Diabetes	Controlled	57 (78.1%)	10 (17.5%)	7 (12.3%)	19 (33.3%)	6 (10.5%)
	Not controlled	15 (20.5%)	0 (0.0%)	2 (13.3%)	5 (33.3%)	2 (13.3%)
	Don't know/Not sure	1 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	0	1	0	0

NB [1]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [2]: DME = respondents with DME ="Yes".
NB [3]: Percentages within groups are calculated from non-missing data for that question.

EXP 7

Question	Response	With DED n (%)	With DME n (%)
Have you had any treatment for diabetic eye disease?	Yes	23 (95.8%)	2 (100.0%)
	No	1 (4.2%)	0 (0.0%)
	Total valid response	24 (100.0%)	2 (100.0%)
	Total missing	0	6
What treatment did you receive?	Laser	16 (69.6%)	1 (50.0%)
	Anti-VEGF	8 (34.8%)	2 (100.0%)
	Surgery	16 (69.6%)	1 (50.0%)
	Total valid response	23 (100.0%)	2 (100.0%)
	Total missing	1	6
Did you complete the treatment?	Yes	17 (73.9%)	1 (50.0%)
	No	5 (21.7%)	0 (0.0%)
	Still receiving treatment	1 (4.3%)	1 (50.0%)
	Total valid response	23 (100.0%)	2 (100.0%)

Question	Response	With DED n (%)	With DME n (%)
	Total missing	1	6
Do you feel that the treatment worked?	Yes, and vision improved	12 (66.7%)	2 (100.0%)
	Yes, but vision stayed the same	3 (16.7%)	0 (0.0%)
	No	2 (11.1%)	0 (0.0%)
	Still waiting to know	1 (5.6%)	0 (0.0%)
	Total valid response	18 (100.0%)	2 (100.0%)
	Total missing	6	6
What is/are the reason(s) that you did not complete the treatment?	Other	5 (100.0%)	0 (0.0%)
	Total valid response	5 (100.0%)	0 (0.0%)
	Total missing	19	8
What are the reason(s) that you have not had treatment for diabetic eye disease?	Still waiting for treatment	1 (100.0%)	0 (0.0%)
	Total valid response	1 (100.0%)	0 (0.0%)
	Total missing	23	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.

DR
Barometer
Shifting the needle

DR Barometer

Shifting the needle

DRBarometer.com

IFA

IAPB

International Diabetes Federation

BAYER