DR Barometer
Shifting the needle

The Diabetic Retinopathy Barometer Report

China

IFA IAPB International Diabetes Federation BAYER

Contents

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

Introduction
Global Study

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

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

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 to enable people with diabetes to maintain their health and ensure that the contribution that they can make to family and community are not compromised.

Background

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

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

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

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

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

Study Populations

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

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

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

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

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

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

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

Introduction
China Study

Demographic Characteristics[1]

China is estimated to be the most populous country in the world with an estimated population of approximately 1.3 billion. Currently, it is estimated that 17% of China's population is under the age of 15 (~237 million) while 10% is over the age of 65 (~137 million).

Low fertility rates will continue to be a feature in the next three decades leading to a population decline. The ageing of the currently large middle-aged cohorts and increasing life expectancy will lead to dramatic shifts in the age structure.

By 2050, only ~14% of the population will be under the age of 15 while ~28% of China's total populations will be comprised of those aged 65 years or older. This means that in just over 30 years the population aged 65 years or older will almost triple and reach an all-time high of approximately 368 million.

Diabetes in China[2]

There are 415 million people living with diabetes and more than 153.2 million people are in the Western Pacific region as defined by the IDF. By 2040, this number is expected to rise to 214.8 million.

The region is the world's most populous region with 39 countries and territories and is home to 36.9% (153.2 million) of the total number of people with diabetes in the world and over half (52.1%) of this region's population living with diabetes are undiagnosed. It is important to note that of the 153.2 million people living with diabetes, 61.6% live in cities and 90.2% live in low or middle-income countries.

China has the most people in the world living with diabetes at ~109.6 million (99,641.2-133,417.4‡), which accounts to ~72% of people living with diabetes in the region. China will continue this trend in 2040 with an estimated 150.7 million (138.0-179.4‡).

It is important to note that China is the 2nd country in the world for diabetes-related health expenditures at $51 billion USD. China will continue to be in the top ten countries for diabetes-related health expenditures in 2040 at an estimated $72 billion USD.

China's national prevalence (20-79 years) is 10.6% (9.6-12.9‡) and the age-adjusted comparative prevalence is 9.8% (8.9-12.1‡). Deaths attributed to diabetes in China in 2015 were 1,299,670, which accounts to ~68% of the diabetes related deaths experienced in the region. The estimated number of undiagnosed cases was ~57.8 million (51,634.1-69,136.9‡).

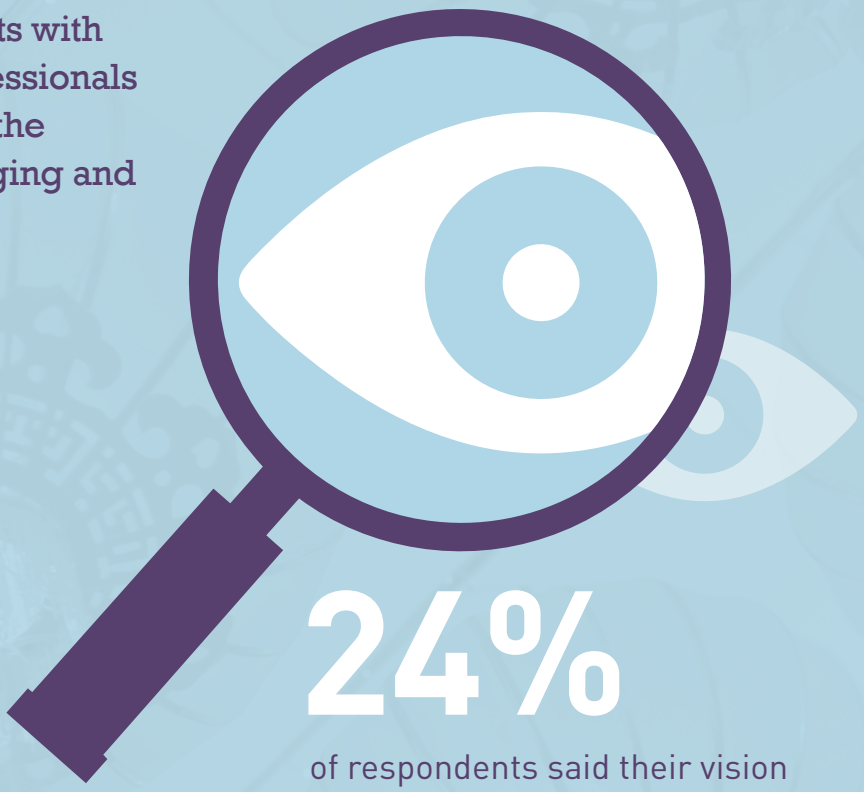
Study Populations: China

As reported by 75 respondents with diabetes in China, 24% were diagnosed with DED and a further 13% with DME.

Eighty-six health care professionals completed the survey in China. Of these, 10 were diabetes specialist providers (12%), 26 were ophthalmologists (30%), and one was a primary care provider (1.2%). The remaining respondents were either nurses, health educators or other types of professionals.

The DR Barometer Study: **China Overview**

The DR Barometer study was conducted in 41 countries. In China, 75 adults with diabetes and 86 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.



34%

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

24%

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

22%

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

DR: Diabetic Retinopathy
DME: Diabetic Macular Edema

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95%

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

67%

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

45%

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

19%

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

China
DR Barometer Findings:
Adults with Diabetes

Key Demographic Characteristics

Seventy-five adults with diabetes completed the patients' survey in China: 59% were female and 41% were male (see Table 1). Seventy-three percent lived in an urban setting and 27% in a non-urban setting (see Appendix Table 4.2).

The education levels of all respondents were as follows: 9.9% did not complete primary school, 16% were educated to a primary school level, 23% to a secondary school level, 45% to a college or university level, and 7% to a graduate or post-graduate level (see Appendix Table 4.3).

Forty-eight percent of all respondents were in paid employment, 24% were retired, and 14% were not working (see Appendix Table 4.4).

Most respondents (40%) were aged between 40 and 59 years (27% were 18-39 years, 32% were 60-79 years, and 1.3% were 80 years and over). Sixty-seven percent were of traditional working age (18- 59 years).

Of the respondents in China, 20% had been diagnosed with type 1 diabetes and 71% with type 2 diabetes. A further 9.3% of respondents were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Twenty-four percent of respondents (n=18) had been diagnosed with DED and a further 13% (n=10) with DME.

Eleven percent of those surveyed were diagnosed with diabetes within the last year, 1 - 5 years ago (37%), 6 - 10 years ago (30%), 11 - 15 years ago (14%), 16 - 20 years ago (4.1%), and 21 years ago or more (4.1%) (see Appendix Table 2.2).

Amongst 18 to 39-year-olds, 30% had type 1 and 55% had type 2 diabetes. In the 40-59 age group, 27% had type 1 and 67% had type 2 diabetes, 4.2% of 60-79-year-olds had type 1 diabetes and 88% had type 2.

In people aged 18-39 years, 30% had DED and 15% had DME, one in five respondents were in both subgroups for those aged 40-59, and for people aged 60-79 years a quarter had DED and 4.2% had DME.

In those diagnosed with diabetes in the last year, a quarter had DED and 13% were diagnosed with DME, this increased to 32% for those with DED but decreased to 9% with DME diagnosed between 6 and 10 years ago. The proportion with DED increased again for those diagnosed 16-20 years ago as a third of the respondents had DED and two thirds had DME. A third of respondents who had been diagnosed 21 years ago or more had DED.

While over half (51%) of respondents reported that their diabetes was well controlled, just under half (49%) felt that this was not the case. For those who felt their diabetes was controlled, 22% had DED and 8.3% had DME and where their condition was not well controlled 26% had DED and 20% 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		75 (100.0%)	15 (20.0%)	53 (70.7%)	18 (24.0%)	10 (13.3%)
Gender	Male	29 (40.8%)	7 (24.1%)	20 (69.0%)	6 (20.7%)	3 (10.3%)
	Female	42 (59.2%)	7 (16.7%)	32 (76.2%)	11 (26.2%)	7 (16.7%)
	Total Missing	4	1	1	1	0
Age	18-39 yrs.	20 (26.7%)	6 (30.0%)	11 (55.0%)	6 (30.0%)	3 (15.0%)
	40-59 yrs.	30 (40.0%)	8 (26.7%)	20 (66.7%)	6 (20.0%)	6 (20.0%)
	60-79 yrs.	24 (32.0%)	1 (4.2%)	21 (87.5%)	6 (25.0%)	1 (4.2%)
	80 yrs. plus	1 (1.3%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	8 (10.8%)	5 (62.5%)	2 (25.0%)	2 (25.0%)	1 (12.5%)
	1 - 5 yrs.	27 (36.5%)	3 (11.1%)	19 (70.4%)	5 (18.5%)	4 (14.8%)
	6 - 10 yrs.	22 (29.7%)	3 (13.6%)	19 (86.4%)	7 (31.8%)	2 (9.1%)
	11 - 15 yrs.	10 (13.5%)	1 (10.0%)	9 (90.0%)	2 (20.0%)	1 (10.0%)
	16 - 20 yrs.	3 (4.1%)	0 (0.0%)	3 (100.0%)	1 (33.3%)	2 (66.7%)
	21 yrs. plus	3 (4.1%)	2 (66.7%)	1 (33.3%)	1 (33.3%)	0 (0.0%)
	Don't know/ Not sure	1 (1.4%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	0	0	0	0
Control of Diabetes	Controlled	36 (50.0%)	5 (13.9%)	27 (75.0%)	8 (22.2%)	3 (8.3%)
	Not controlled	35 (48.6%)	8 (22.9%)	26 (74.3%)	9 (25.7%)	7 (20.0%)
	Don't know/ Not sure	1 (1.4%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	3	1	0	1	0

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

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

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

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

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

Knowledge and Management of Diabetes

Ninety-five percent of those surveyed saw a health care professional for their diabetes, with 81% seeing a diabetes specialist (average number of visits was 3.9 times per year) and 17% seeing a general or family doctor (average number of visits was 2.9 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Eighty-eight percent received information from a doctor or nurse, 36% from a health educator, and 35% from a diabetes organisation or other health organisation (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=72)
Doctor or nurse	63 (87.5%)
Health educator	26 (36.1%)
Diabetes organisation or other health organisation	25 (34.7%)
Family/Friends/Neighbours	23 (31.9%)
TV/Radio/Newspaper/Magazines	23 (31.9%)
Internet	23 (31.9%)
Nutritionist or dietician	19 (26.4%)
Pharmacist	11 (15.3%)
Social media (e.g. Facebook, Twitter, blogs)	9 (12.5%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 79% managed their diabetes with diet, 64% with oral medicine, and 50% with exercise. Of the respondents with type 2 diabetes, 94% reported that they managed their condition with oral medicine, 93% with diet, 70% with exercise, 60% with insulin, and 15% with natural or herbal medicine.

Eighteen percent of respondents were enrolled in diabetes management programmes and of those 92% said the programme included information on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

The nature and frequency of tests that people with diabetes experienced included blood glucose checks and eye checks. For those who had eye checks (82%), these occurred at less than 6 months (64%), 6 - 12 months (7.5%), and greater than 12 months (10%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: it was too hard to eat the right things (47%), the high cost of care (43%), the person did not know enough about their diabetes (38%), travel to their regular doctor or specialist was difficult (31%), and the long wait times to schedule an appointment to see their doctor or specialist (29%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (68%), health education and information (58%), coordination of healthcare and services by a professional (56%), support from family or friends (49%), and mobile services (services that travel to or near your home) (49%) were identified as important to improving the management of their diabetes (see Appendix Table 2.10).

Nature and Information about Complications

Eighty-two percent of respondents were aware of vision loss and other complications, such as: foot ulcers (67%), cardiovascular disease or stroke (61%), kidney disease (57%) and neuropathy (56%) were associated with diabetes (see Appendix Table 2.11).

Patients were most concerned about vision loss (35%), kidney disease (22%), cardiovascular disease or stroke (17%), amputation (11%), and foot ulcers (2.8%) (see Appendix Table 2.12).

Thirty-one percent of respondents reported that they had no complications of diabetes. However, of those who did have complications 36% had vision loss, cardiovascular disease or stroke (21%), kidney disease (19%), foot ulcers (17%) and neuropathy (15%) (see Figure 1 and Appendix Table 2.13).

All people with DED and almost all with DME (90%) had additional complications with their condition (see Table 3 and EXP 1). Aside from vision loss, there was an increase in the frequency of people with DED and DME experiencing complications compared to people without DED. The frequency of foot ulcers increased from 16% in those without DED to 18% with DED and 20% with DME, as with the reporting of cardiovascular disease increasing from 22% for those without DED to 29% with DED.

Figure 1: Presence of complications

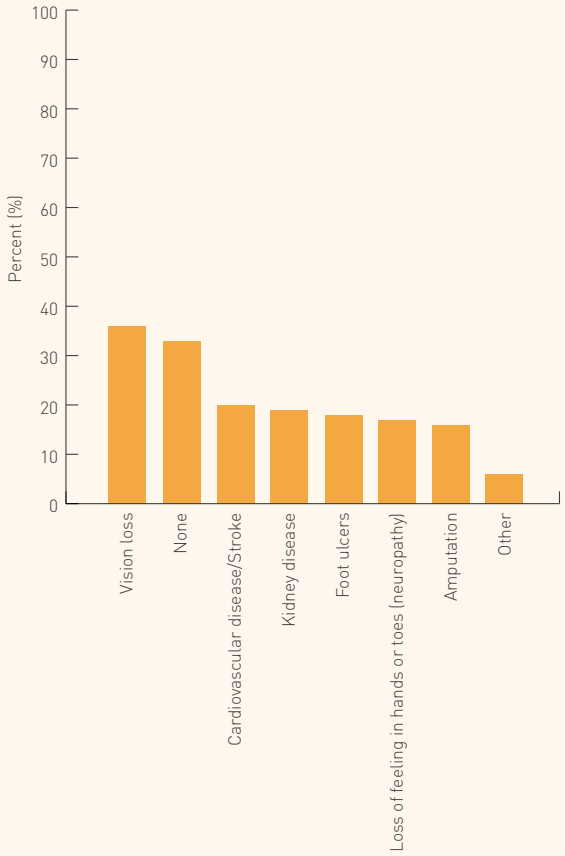


Table 3: Presence of complications without DED, with DED or DME

Complication	Without DED (n=45)	With DED (n=17)	With DME (n=10)
Any	24 (53.3%)	17 (100.0%)	9 (90%)
Vision loss	10 (22.2%)	11 (64.7%)	5 (50.0%)
Kidney disease	7 (15.6%)	6 (35.3%)	1 (10.0%)
Cardiovascular disease/Stroke	10 (22.2%)	5 (29.4%)	0 (0.0%)
Loss of feeling in hands or toes (neuropathy)	6 (13.3%)	4 (23.5%)	1 (10.0%)
Foot ulcers	7 (15.6%)	3 (17.6%)	2 (20.0%)
Amputation	7 (15.6%)	1 (5.9%)	2 (20.0%)
Other	3 (6.7%)	0 (0.0%)	0 (0.0%)
None	21 (46.7%)	0 (0.0%)	1 (10.0%)

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

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

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

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

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

Information about Diabetic Eye Disease and Diabetic Macular Edema

Eighty-two percent of respondents stated that eye complications were discussed with their health care professionals. Notwithstanding this, 45% of patients, either never discussed eye complications with their providers (14%) or discussions only took place once symptoms arose (31%). The frequency of regular discussions varied from every visit (17%), multiple times a year (18%), and once a year (17%) (see Appendix Table 2.14).

Just over half over all patients (51%) reported that they did what they could to prevent vision problems (e.g. get routine screenings, visit specialists). Yet myths and perception around vision changes and prevention strategies were evident with 40% who believed that vision problems were a normal part of ageing and 26% who made no special effort to have a preventative approach to eye health (see Appendix Table 2.15).

Eighty-nine percent of all respondents had received information about DR and DME with their doctor or nurse being the most common source (68%) (see Appendix Table 3.9).

Table 4: Source of information about DR and DME

Source	All respondents (n=71)
Doctor/Nurse	48 (67.6%)
Health educator	23 (32.4%)
Diabetes organisation or other health organisation	18 (25.4%)
Family/Friends/Neighbours	16 (22.5%)
TV/Radio/Newspaper/Magazines	16 (22.5%)
Internet	16 (22.5%)
None of the above	8 (11.3%)

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

Screening for Diabetic Eye Disease

Over three-quarters (76%) of respondents reported having an eye exam for DED, with 78% having the exam within the last year and a further 15% between one and two years ago. Less than a third (32%) of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1 and 3.2).

Over half (56%) of those surveyed thought they should have their eyes examined for DED once a year and 24% said that testing should happen only when symptoms occur. There were a varied small number of respondents who thought that testing should happen every two years, less often then every two years or should not occur at all (see Appendix Table 3.4).

The biggest barriers to eye exams were long wait times to schedule an appointment (34%), some respondents did not know much about their condition (33%), and eye exams were not available near the person's home (27%) (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=70)
Long wait time for appointment	24 (34.3%)
Don't know much about my condition	23 (32.9%)
Eye exams are not available near my home	19 (27.1%)
They are expensive	17 (24.3%)
Long wait time on the day of the visit	17 (24.3%)
Recommended treatments for eye problems are not available	16 (22.9%)
Limited access to diabetes specialists	11 (15.7%)
Referral process is complicated or takes too long	10 (14.3%)
Burden on my family/friends	10 (14.3%)
I'm not likely to have eye complications	9 (12.9%)
Too many other things to do or worry about	7 (10.0%)
Fear of treatment/results	5 (7.1%)
Eye exams are not important	4 (5.7%)
Clinics are too small or lack necessary equipment/staff	2 (2.9%)
Other	10 (14.3%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately for people with DED and for those with DME.

Of those with DED who received treatment (71%), the most common forms of treatment were surgery (50%), anti-VEGF therapy (42%), and laser treatment (33%). Half of the respondents had completed treatment while the other half was still receiving treatment. All respondents felt their treatment had been successful and their vision either had improved (75%) or had stayed the same (25%) (see Table 6).

For the four respondents (24%) with DED who had not received treatment, the reasons reported was that either their doctor did not recommend any treatment (25%), they were still waiting for treatment (25%), the treatment was too expensive (25%), or they had no insurance (25%).

Eighty-six percent of patients with DME (n=6) had received treatment, with the most common being laser treatment, and most felt that the treatment had been successful and either their vision had improved (40%) or had stayed the same (40%).

There was a strong preference (80%) by all those with DME to have a proactive approach in the treatment pathway to prevent further vision loss rather than a reactive approach once further vision loss occurred (see Appendix Table 3.8).

Table 6: Treatment characteristics of patients with DED and DM

Question	Response	With DED (n=17)	With DME (n=7)
Have you had any treatment for diabetic eye disease?	Yes	12 (70.6%)	6 (85.7%)
	No	4 (23.5%)	1 (14.3%)
	Don't know/Not sure	1 (5.9%)	0 (0.0%)
What treatment did you receive?	Laser	4 (33.3%)	5 (83.3%)
	Anti-VEGF	5 (41.7%)	0 (0.0%)
	Surgery	6 (50.0%)	1 (16.7%)
Did you complete the treatment?	Yes	6 (50.0%)	2 (33.3%)
	No	0 (0.0%)	1 (16.7%)
	Still receiving treatment	6 (50.0%)	3 (50.0%)
Do you feel that the treatment worked?	Yes, and vision improved	9 (75.0%)	2 (40.0%)
	Yes, but vision stayed the same	3 (25.0%)	2 (40.0%)
	Still waiting to know	0 (0.0%)	1 (20.0%)
What is/are the reason(s) that you did not complete the treatment?	Appointment times were not convenient	0 (0.0%)	1 (100.0%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	1 (25.0%)	0 (0.0%)
	Still waiting for treatment	1 (25.0%)	0 (0.0%)
	Too expensive	1 (25.0%)	1 (100.0%)
	No insurance	1 (25.0%)	0 (0.0%)
	I'm too busy	0 (0.0%)	1 (100.0%)
	Other	1 (25.0%)	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

Eighty-eight percent of those diagnosed with DED or DME said that their vision was affected (29% significantly, 58% slightly) (see Appendix Table 3.6).

Ninety-five percent of these respondents reported vision issues impacted their daily lives in various ways such as travelling (76%), difficulty experienced in driving a vehicle (62%), leisure activities or exercise (43%), working or keeping a job (43%), conducting household responsibilities, such as cooking or cleaning (24%), managing their underlying diabetes (24%), and social interactions with family and friends (19%) (see Table 7).

Table 7: Activities affected through vision impairment and loss

	All Respondents (n=21)
Travelling	16 (76.2%)
Driving (a car/vehicle)	13 (61.9%)
Leisure activities/exercise	9 (42.9%)
Work or keeping a job	9 (42.9%)
Household responsibilities, such as cooking or cleaning	5 (23.8%)
Managing my diabetes	5 (23.8%)
Social interactions with family/ friends	4 (19.0%)
Other	1 (4.8%)
None	1 (4.8%)

Fifty-three percent of those with DED, and 50% with DME, were in paid employment compared with 46% of respondents without DED (see Table 8 and EXP 5.1). Patients with vision complications reported difficulties with working or keeping a job (43%) and 24% of those with DED (n=4) were not working.

Fifty-four percent of all those surveyed did not receive assistance from the government while 30% received medical assistance (see Appendix Table 4.5). Half of the respondents without DED received assistance from the government; this proportion was the same of those with DME (50%) and decreased in the subgroup of those with DED (35%).

Eighty-three percent of respondents said they had no trouble paying for food at any time during the past year (see Appendix Table 4.6). However, 61% stated that their access to health care was affected by certain factors, for 44% it was affected by their income, where one lives (24%), and one's age (17%) (see Appendix Table 4.7).

Sixty-eight percent of respondents said they worried about their health, followed by money (11%), and housing (5.7%) while 9.9% 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=44)	With DED (n=17)	With DME (n=10)
Are you currently working?	Working for pay	20 (45.5%)	9 (52.9%)	5 (50.0%)
	Working without pay at home (e.g. housework, farming)	4 (9.1%)	2 (11.8%)	4 (40.0%)
	Retired	15 (34.1%)	2 (11.8%)	0 (0.0%)
	Not working	5 (11.4%)	4 (23.5%)	1 (10.0%)
Question	**Response**	**Without DED (n=44)**	**With DED (n=17)**	**With DME (n=10)**
Do you receive assistance from the government?	Income assistance	4 (9.1%)	1 (5.9%)	1 (10.0%)
	Medical assistance	14 (31.8%)	3 (17.6%)	4 (40.0%)
	Food assistance	2 (4.5%)	0 (0.0%)	1 (10.0%)
	Housing assistance	5 (11.4%)	2 (11.8%)	0 (0.0%)
	Pension assistance	13 (29.5%)	1 (5.9%)	1 (10.0%)
	None of the above	22 (50.0%)	11 (64.7%)	5 (50.0%)
Question	**Response**	**Without DED (n=44)**	**With DED (n=17)**	**With DME (n=10)**
Did you have trouble paying for food at any time during the past year?	Yes	5 (11.4%)	3 (17.6%)	4 (40.0%)
	No	39 (88.6%)	14 (82.4%)	6 (60.0%)

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).

Ninety-four percent of people with DED and 70% of those with DME reported self-rated health as poor compared with 79% of people without DED. A third of those with DED and all respondents with DME experienced limitations in their daily activities due to poor mental or physical health compared to 27% of those without DED.

Ninety-four percent of people with DED, 79% without DED and 70% with DME reported that their health was poor. While reported health was reasonably consistent whether respondents had DED or not, there was a 6% increase in the activity limitation days between those without DED and those with DED (see Appendix EXP 2).

Compared with 23% of those without DED, 24% of people with DED and 40% of people with DME experienced limitations to their daily activities due to poor health. Where health impacted daily activities, the primary limitations were diabetes, eye or vision problems and back or neck problems.

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	9 (21.4%)	1 (5.9%)	3 (30.0%)
Self-rated health: Poor	33 (78.6%)	16 (94.1%)	7 (70.0%)
Physically unhealthy days	12 (41.4%)	5 (38.5%)	2 (50.0%)
Mentally unhealthy days	12 (37.5%)	3 (27.3%)	2 (66.7%)
Unhealthy days	14 (46.7%)	5 (41.7%)	2 (66.7%)
Activity limitation days	4 (26.7%)	2 (33.3%)	2 (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.

China
DR Barometer Findings:
Health Care Professionals

Key Demographic Characteristics

There were 86 health care professionals who answered at least one of the survey questions in China. Of these, one was a primary care provider (1.2%), ten were diabetes specialists (12%) and 26 were ophthalmologists (30%). The remaining respondents were nurses, health educators or other professionals (see Appendix PT 1.3).

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

Health care professionals as a group had been practicing for an average of 13 years, with the ophthalmologist group practicing for an average of 12 years (see Appendix PT 1.5).

Health care professionals were well educated (67% with a graduate or advanced degree); 79% were female and 21% male; and, the largest proportion (47%) were aged 30 - 39 years with a further 33% in the 40-49 age group (see Table 11 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		86 (100.0%)	1 (1.2%)	10 (11.6%)	26 (30.2%)
Age group	18 - 29 yrs.	6 (14.0%)	0 (0.0%)	0 (0.0%)	1 (5.3%)
	30 - 39 yrs.	20 (46.5%)	0 (0.0%)	3 (42.9%)	12 (63.2%)
	40 - 49 yrs.	14 (32.6%)	0 (0.0%)	3 (42.9%)	4 (21.1%)
	50 - 59 yrs.	2 (4.7%)	0 (0.0%)	0 (0.0%)	2 (10.5%)
	60 - 69 yrs.	1 (2.3%)	0 (0.0%)	1 (14.3%)	0 (0.0%)
Gender	Female	34 (79.1%)	0 (0.0%)	4 (57.1%)	15 (78.9%)
	Male	9 (20.9%)	0 (0.0%)	3 (42.9%)	4 (21.1%)
Education	Secondary School	1 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	College/University	13 (30.2%)	0 (0.0%)	0 (0.0%)	3 (15.8%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	29 (67.4%)	0 (0.0%)	7 (100.0%)	16 (84.2%)

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

Clinical Practice Characteristics

Similarly, to all providers (90%), 92% of ophthalmologists had their main practice setting in a hospital and 8% in an eye clinic. Ninety-four percent of health care professionals worked in an urban setting (see Appendix PT 2.1 and PT 2.2).

Most health care professionals worked in the government sector (51%) and ophthalmologists worked mainly in the government (63%), non-profit (17%), and combined or mixed (17%) sectors (see Appendix PT 2.3).

The health care professionals reported that for some 78% of patients pay a co-payment along and insurance covers the remaining fees for services, 30% pay out-of-pocket (full fees) for services, and 26% of patients pay through insurance. The pattern was similar for ophthalmologists, where 95% of patients pay a co-payment and insurance covers the remaining fees for services, 38% pay out-of-pocket (full fees) for services, and 19% of patients pay through insurance for services (see Appendix PT 2.7).

On average, all providers see 101 patients per week and on average 36% of these patients had diabetes. Similarly, ophthalmologists saw an average of 98 patients per week and 25% had diabetes (see Appendix PT 2.6)

For all health care professionals, including ophthalmologists, the average wait time for an appointment was most commonly less than one week (49%) (see Appendix PT 2.5).

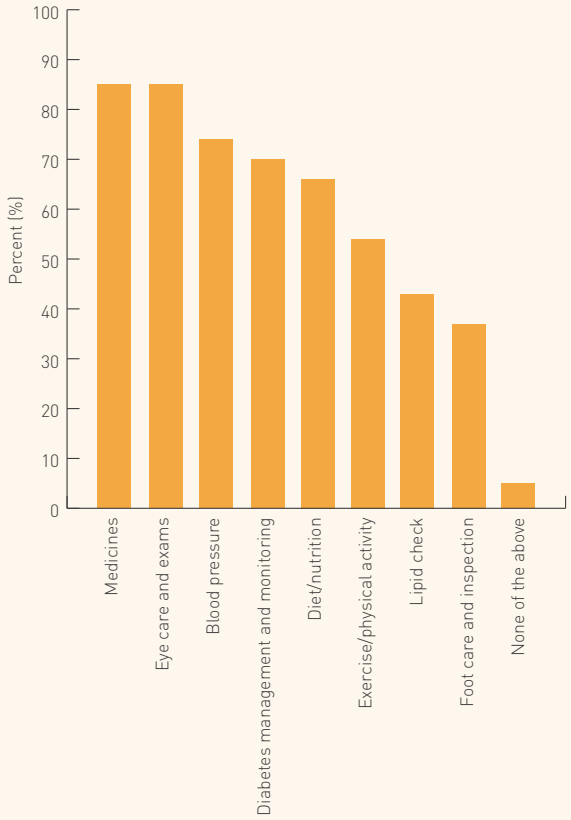
Table 11: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=55)	Ophthalmologist (n=21)
Less than 1 week	27 (49.1%)	12 (57.1%)
More than 1 week but less than 1 month	2 (3.6%)	1 (4.8%)
More than 3 months but less than 6 months	1 (1.8%)	0 (0.0%)
Do not take appointments	7 (12.7%)	1 (4.8%)
Other	8 (14.5%)	2 (9.5%)
Don't know/Not sure	10 (18.2%)	5 (23.8%)

Patient Education Information

A wide range of topics related to diabetes and its management were addressed by the health care professionals in a routine visit (see Figure 2 and Appendix PT 2.10).

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



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

Twenty-four percent of all providers reported that they had sufficient information about eye complications, 31% said the information on eye complications was insufficient, and 6.7% said there was no such information included in the diabetes information. Overall, 27% of those surveyed had no written information available for their patients (see Table 12 and Appendix PT 2.11).

Some ophthalmologists (26%) had sufficient information about diabetes and potential eye complications available for their patients, 21% had information but that which was on eye complications was insufficient, and 5.3% reported that information on eye complications was not included. Thirty-two percent of ophthalmologists said there was no written information available for their patients at all.

Guidelines and Protocols

Sixty-seven percent of providers, including 47% of ophthalmologists, had written protocols for the management of diabetes, which were used by staff. However, 13% had no available protocols (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, 56% of health care professionals, including 58% of ophthalmologists, had written protocols and these were used by staff but for some 2%, the protocols available were not used by staff. Twenty-two percent of providers did not have protocols on the management of diabetes-related vision issues available (see Table 13 and Appendix PT 2.13).

Table 12: Availability and use of information and protocols

Question	Response	All Respondents (n=45)	Ophthalmologist (n=19)
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	11 (24.4%)	5 (26.3%)
	Yes, but information on eye complications is not sufficient	14 (31.1%)	4 (21.1%)
	Yes, but no information on eye complications is included	3 (6.7%)	1 (5.3%)
	No written information is available for patients	12 (26.7%)	6 (31.6%)
	Don't know/Not sure	5 (11.1%)	3 (15.8%)
Question	**Response**	**All Respondents (n=45)**	**Ophthalmologist (n=19)**
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	25 (55.6%)	11 (57.9%)
	Yes, available but not used by staff	1 (2.2%)	1 (5.3%)
	Not available	10 (22.2%)	2 (10.5%)
	Don't know/Not sure	9 (20.0%)	5 (26.3%)

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

Screening Protocols and Barriers in the Care Pathway

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

For either type 1 or type 2 diabetes, most providers (56%), and ophthalmologist (60%), reported that the initial eye exam should occur at the time of diagnosis of diabetes (see Appendix PT 2.14).

Overall, sixty-one percent of health care professionals, including 53% of ophthalmologists, reported that follow-up eye examinations should be conducted every year and most ophthalmologists (64%), and health care professionals (77%), screened patients for DR (see Appendix PT 2.15 and PT 2.16).

Across all health care professionals, 42% send reminders to their patients for follow-up appointments. Seventy percent of the health care professionals, including 68% of ophthalmologists, shared patient relevant information with other providers to optimise patient care management (see Appendix PT 2.19 and PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for health professionals and ophthalmologists respectively were the duration of diabetes (57% vs 63%), the presence of comorbidities such as hypertension (52% vs 63%), high glucose levels (48% vs 58%), a patient's age (41% vs 53%), and a patient's ability to adhere to recommendations (36% vs 37%) (see Appendix PT 2.17).

As reported by health care professionals, and similarly with ophthalmologists, the major barriers to optimising eye health faced by patients with diabetes were a lack of knowledge and/or awareness (63%), the cost of care (54%) and patients believing that eye complications were unlikely (44%) (see Table 13 and Appendix PT 2.18).

Table 13: Major barriers to optimising eye health

Response	All Respondents (n=43)	Ophthalmologists (n=19)
Lack of knowledge and/or awareness	27 (62.8%)	15 (78.9%)
Cost of care	23 (53.5%)	13 (68.4%)
Patients feel eye complications are unlikely	19 (44.2%)	11 (57.9%)
Patients feel eye exams are not important	18 (41.9%)	11 (57.9%)
Patients fear of treatment/results	12 (27.9%)	10 (52.6%)
Proximity to care	9 (20.9%)	7 (36.8%)
Patients feel they are a burden on family/friends	11 (25.6%)	7 (36.8%)
Limited access to diabetes specialists	10 (23.3%)	6 (31.6%)
Limited access to eye specialists	13 (30.2%)	5 (26.3%)
Patients have competing responsibilities and priorities	5 (11.6%)	4 (21.1%)
Long wait time for appointment	7 (16.3%)	3 (15.8%)
Long wait time on the day of visit	6 (14.0%)	2 (10.5%)
Referral process	8 (18.6%)	2 (10.5%)
Recommended treatments are not available	3 (7.0%)	0 (0.0%)
Clinic too small or lack necessary equipment/staff	2 (4.7%)	0 (0.0%)
Other	4 (9.3%)	2 (10.5%)

China
DR Barometer Findings:
Ophthalmologists

Screening

There were sixteen ophthalmologists who answered at least one of the supplementary questions (see Appendix PT 4.1 to PT 4.14). On average, 22% of patients seen by the ophthalmologists had DR and 17% DME (see Appendix PT 4.1 and PT 4.2).

The most common wait time for a screening appointment for DED was less than one week (50%), with 19% stating other. Thirty-one percent of ophthalmologists said there was no wait from time of screening to diagnosis, and 19% (n=3) reported a wait time of less than one week (see Appendix PT 4.3 and PT 4.4).

Treatment and Challenges

Seventy-five percent of ophthalmologists personally administer treatment for DR and the most common factors influencing treatment were the duration of diabetes (92%), the presence of comorbidities such as hypertension (92%) and high glucose levels (92%) (see Appendix PT 4.6 and PT 4.7).

The most common outreach venues for screening for DED were mobile screening centres (44%), health fairs for people with diabetes (31%), health fairs for all (19%), and vision centres (19%) (see Appendix PT 4.13).

Ninety-four percent ophthalmologists said they screen patients for DR based on fundoscopy through dilated pupils, 69% used fluorescein angiography, 63% use retinal photo, 63% use optical coherence tomography, and 25% based on fundoscopy through undilated pupils. Ninety-four percent treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and PT 4.9).

Fifty-six percent (n=9) of ophthalmologists reported that patients present when visual problems have already occurred, 25% (n=4) said that patients present in time for screening and 19% (n=3) report patients present too late for effective treatment, although the sample is notably very small (see Appendix PT 4.10).

Eighty-one percent had received specific training on treatment and diagnosis of DR and or DME, with 69% receiving the training within the past year, 23% between one and five years ago, and 7.7% five years ago or more. Most (81%) 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 challenges for improving patient outcomes in DED as reported by ophthalmologist were late diagnosis (69%), the limited access to patient education on DR and DME (69%), and no universal guidelines on referrals or screening (50%, n=8) (see Table 15).

Table 14: Challenges for improving outcomes in DED

Question	Response	Ophthalmologist (n=16)
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Late diagnosis	11 (68.8%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	11 (68.8%)
	No universal guidelines on referral/ screening	8 (50.0%)
	Referral pathways	7 (43.8%)
	Reimbursement/restrictions on approved therapy	6 (37.5%)
	Government/insurance not able to cover patient costs	5 (31.3%)
	Current available therapies not effective	4 (25.0%)
	Multi-disciplinary team integration is poor	4 (25.0%)
	Ineffective screening services	4 (25.0%)
	No universal guidelines on how to treat	2 (12.5%)
	No universal guideline on when to treat	1 (6.3%)

China
DR Barometer Summary

In China, 75 adults with diabetes and 86 health care professionals have provided insight about their experiences of living with, managing and treating diabetes, DR and DME.

The results of the DR Barometer Study, China were intended to improve the level of awareness around diabetes and eye complications, and access and barriers to diabetes management, including screening for DED and DME and timely treatment.

China is estimated to be the most populous country in the world with an estimated population of approximately 1.3 billion with an estimated 17% under the age of 15 years (~2.3 million) 10% over the age of 65 years (~1.3 million).

By 2050, only ~14% of the population will be under the age of 15 while ~28% of China's total populations will be comprise of those aged 65 years or older. This means that in just over 30 years the population aged 65 years or older will almost triple and reach an all-time high of approximately 3.6 million.

Alongside the demographic changes, the prevalence of people with diabetes is climbing rapidly. Today China has the most people in the world living with diabetes at ~109.6 million (99,641.2-133,417.4‡), which accounts to ~72% of people living with diabetes in this region and this trend is anticipated to continue into 2040 with an estimated 150.7 million (138.0-179.4‡).

China is the 2nd country in the world for diabetes-related health expenditures at $51 billion USD and this is expected to continue toward 2040 with an estimated cost of some $72 billion USD.

Unlike other countries in the study, a younger population was not associated with type 1 diabetes. Thirty percent of those in the youngest age group (18-39 years) had type 1 diabetes (55% type 2) and in the 40 – 59 age group 27% had type 1 (67% type 2).

People were most often informed about their condition by health professionals such as the doctor and nurse (88%). Diabetes and other health organisations, the health educator, family, friends and the TV, radio, newspaper or magazines also played important roles and were viewed as valuable sources of information (32-35%). A trend globally, which was reflected in the China study, was the increasing use of the internet for information by 31% of the respondents.

Only 18% of respondents were enrolled in diabetes management programmes and almost all (92%) noted the programme included information on the importance of screening for eye complications.

Many of those surveyed struggled with the management of their diabetic condition with some issues that were within their personal control such as eating the right foods and balancing the responsibilities of family and work without compromising their only health. Of concern is the finding that 38% of respondents felt that they didn't know enough about their condition, 31% said that travelling to the doctor and specialist was difficult and the long wait times for an appointment was a further barrier.

There was a relatively high awareness of the complications associated with diabetes. More than a third (35%) of respondents were concerned about vision loss followed by kidney disease and cardiovascular disease. Those with complications had vision loss (36%), cardiovascular disease or stroke, kidney disease, foot ulcers, and neuropathy

Knowing that diabetic-related vision loss is preventable addressing barriers to eye screening is an important policy issue. While over three-quarters of respondents had received an eye exam, which is understandable considering the purposeful sample, there remained many barriers including long wait times on the day of the appointment, the lack of understanding about their diabetes condition and eye exams not being available near their home.

Evidence shows that the relationship between the patient and the health care professional is critical to ensure realistic and optimal patient outcomes. It was therefore alarming that 45% of patients surveyed had either never had a conversation about eye complications with their health professional or it only took place only once symptoms were present. Equally concerning is the myths and perceptions around vision changes with more that 40% reporting that vision problems were a normal part of ageing and over a quarter not making any special effort to prevent vision problems.

Eighty-seven percent of people with DED or DME said that their vision was slightly or significantly affected which in turn impacted their health, lifestyle, and life choices. A third of those with DED, and all respondents with DME, experienced limitations in their daily activities due to poor mental or physical health. The functional impact of DED and DME was staggering with 76% having difficulty travelling, 62% with driving a vehicle, and 42% unable to fully participate in leisure activities, exercise, or working or keeping a job.

A proactive treatment approach to prevent further vision loss was preferred rather than reactive treatment once further vision loss had occurred. However, a significant proportion of respondents (61%) felt their access to health care was affected by certain factors, and for 44% it was due to limited income.

Patient education is very much at the heart of a proactive approach so it was of great concern that findings showed that only 24% of providers had written information on diabetes and eye complications that was viewed as sufficient. Furthermore, 56% of all providers, including only 58% of ophthalmologists, had written protocols for the detection and management of diabetes-related vision issues that were used by staff. Twenty-two percent of providers did not have protocols on the management of diabetes-related vision.

For patients with either type 1 or type 2 diabetes, 56% and 60% of all providers respectively said that an initial eye exam should occur at the time of diagnosis of diabetes with over half of the providers (61%) and ophthalmologists (53%) reporting that follow-up eye examinations should be annual.

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

A lack of knowledge and or awareness, the high cost of care and patients feeling that complications were unlikely were viewed by ophthalmologists as some of the greatest challenges for improving patient outcomes in DED.

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

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 China that assisted in the dissemination of patient and provider surveys, your contributions were pivotal to the success of the DR Barometer Study.

DR Barometer
Shifting the needle

Appendices

The Diabetic Retinopathy Barometer Survey: Appendices for China

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	96 (100.0%)
Respondents aged 18 or over	95 (99.0%)
Respondents with diabetes	78 (81.3%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	96 (100.0%)
Included in Diabetic Analysis Set	75 (78.1%)
Excluded from Diabetic Analysis Set	21 (21.9%)
Reasons for exclusion from diabetic analysis set	.
Under 18 years of age	1
Not diagnosed with diabetes	16
Missing information on diabetes diagnosis	1
Gestational diabetes only	3

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	75 (100.0%)
World Bank Income Group: Upper-middle income	75 (100.0%)
Persons with diabetic eye disease (DED)	18 (24.0%)
Persons with diabetic macular edema (DME)	10 (13.3%)
Persons with Type I diabetes	15 (20.0%)
Persons with Type II diabetes	53 (70.7%)
Persons not seeing health care professional for diabetes	4 (5.3%)
Persons seeing health care professional for diabetes	70 (93.3%)
Persons with eye disease & not received treatment	5 (6.7%)

Survey Information	Number of Respondents (%)
Persons with eye disease & received treatment	18 (24.0%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	15 (20.0)
	Type II	53 (70.7)
	Don't know/Not sure	7 (9.3)
	Total Valid Response	75 (100.0)

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	8 (10.8)
	1 - 5 years ago	27 (36.5)
	6 - 10 years ago	22 (29.7)
	11 - 15 years ago	10 (13.5)
	16 - 20 years ago	3 (4.1)
	21 years ago or longer	3 (4.1)
	Don't know/Not sure	1 (1.4)
	Total Valid Response	74 (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	70 (94.6)
	No	4 (5.4)
	Total Valid Response	74 (100.0)
	Total missing	1
What kind of health care professional?	General/Family Doctor	12 (17.4)
	Nurse	1 (1.4)

Question	Response	Number of Respondents (%)
	Diabetes Specialist	56 (81.2)
	Total Valid Response	69 (100.0)
	Total missing	6

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	11
	Mean	2.9
	SD	1.9
	Median	2.0
	Min	1
	Max	6
	Don't know/Not sure	1
Nurse	Don't know/Not sure	1
Diabetes Specialist	Total valid numeric response (n)	32
	Mean	3.9
	SD	3.3
	Median	2.5
	Min	1
	Max	12
	Don't know/Not sure	18
	Total missing	6

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	63 (87.5%)
	Health educator	26 (36.1%)
	Nutritionist or dietitian	19 (26.4%)
	Diabetes organization or other health organization	25 (34.7%)
	Family/Friends/Neighbors	23 (31.9%)

Question	Response	Number of Respondents (%)
	TV/Radio/Newspaper/Magazines	23 (31.9%)
	Internet	23 (31.9%)
	Social media (e.g. Facebook, Twitter, blogs)	9 (12.5%)
	Pharmacist	11 (15.3%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	62 (86.1%)
	Oral medicine	62 (86.1%)
	Exercise	46 (63.9%)
	Insulin	41 (56.9%)
	Natural/Herbal medicine	9 (12.5%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	13 (17.6)
	No	61 (82.4)
	Total Valid Response	74 (100.0)
	Total missing	1
Who sponsors the programme?	Hospital support program	6 (46.2)
	Clinic support program	1 (7.7)
	Pharmaceutical support program	3 (23.1)
	Don't know/Not sure	3 (23.1)
	Total Valid Response	13 (100.0)
	Total missing	62

Question	Response	Number of Respondents (%)
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	12 (92.3)
	No	1 (7.7)
	Total Valid Response	13 (100.0)
	Total missing	62

Table 2.7

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
Blood glucose test	Yes	71 (98.6%)
	Less than 6 months	66 (91.7%)
	6 - 12 months	3 (4.2%)
	Greater than 12 months	2 (2.8%)
	Total valid response	71 (98.6%)
	Total missing	4
	Don't know/Not sure	1 (1.4%)
	Total valid response	72 (100.0%)
	Total missing	3
Urine check	Yes	60 (87.0%)
	Less than 6 months	45 (65.2%)
	6 - 12 months	10 (14.5%)
	Greater than 12 months	5 (7.2%)
	Total valid response	60 (87.0%)
	Total missing	15
	No	7 (10.1%)

Test	Response	Number of Respondents (%)
	Don't know/Not sure	2 (2.9%)
	Total valid response	69 (100.0%)
	Total missing	6
Weight check	Yes	59 (86.8%)
	Less than 6 months	48 (70.6%)
	6 - 12 months	8 (11.8%)
	Greater than 12 months	3 (4.4%)
	Total valid response	59 (86.8%)
	Total missing	16
	No	6 (8.8%)
	Don't know/Not sure	3 (4.4%)
	Total valid response	68 (100.0%)
	Total missing	7
Blood pressure check	Yes	60 (88.2%)
	Less than 6 months	50 (73.5%)
	6 - 12 months	4 (5.9%)
	Greater than 12 months	6 (8.8%)
	Total valid response	60 (88.2%)
	Total missing	15
	No	5 (7.4%)
	Don't know/Not sure	3 (4.4%)
	Total valid response	68 (100.0%)
	Total missing	7
Foot check	Yes	40 (61.5%)
	Less than 6	31 (47.7%)

Test	Response	Number of Respondents (%)
	months	
	6 - 12 months	3 (4.6%)
	Greater than 12 months	5 (7.7%)
	Total valid response	39 (60.0%)
	Total missing	36
	No	17 (26.2%)
	Don't know/Not sure	8 (12.3%)
	Total valid response	65 (100.0%)
	Total missing	10
Eye check	Yes	55 (82.1%)
	Less than 6 months	43 (64.2%)
	6 - 12 months	5 (7.5%)
	Greater than 12 months	7 (10.4%)
	Total valid response	55 (82.1%)
	Total missing	20
	No	8 (11.9%)
	Don't know/Not sure	4 (6.0%)
	Total valid response	67 (100.0%)
	Total missing	8

Table 2.8

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	6 (8.3%)
	Well	30 (41.7%)
	Not very well	31 (43.1%)

Question	Response	Number of Respondents (%)
	Not well at all	4 (5.6%)
	Don't know/Not sure	1 (1.4%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	31 (43.1%)
	No insurance	16 (22.2%)
	Travel to my regular doctor or specialist is difficult	22 (30.6%)
	Long wait time for an appointment to see my doctor or specialist	21 (29.2%)
	Health services needed are not available	16 (22.2%)
	Don't know enough about diabetes	27 (37.5%)
	Too hard to eat the right things	34 (47.2%)
	Too many other things to do	16 (22.2%)
	Stigma or discrimination because of diabetes	1 (1.4%)
	Don't want to think about having diabetes	5 (6.9%)
	Other	4 (5.6%)
	Total Valid Response	72 (100.0%)
	Total missing	3

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	49 (68.1%)
	Support groups	25 (34.7%)

Question	Response	Number of Respondents (%)
	Support from family or friends	35 (48.6%)
	Health education and information	42 (58.3%)
	Mobile services (services that travel to or near your home)	35 (48.6%)
	Coordination of healthcare and services by a professional	40 (55.6%)
	Emergency helpline	7 (9.7%)
	Other	2 (2.8%)
	None	1 (1.4%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.11

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	36 (50.0%)
	Foot ulcers	48 (66.7%)
	Increased risk of broken bones or fractures	23 (31.9%)
	Loss of feeling in hands or toes (neuropathy)	40 (55.6%)
	Vision loss	59 (81.9%)
	Irritable bowel disease	14 (19.4%)
	Kidney disease	41 (56.9%)
	Cardiovascular disease/Stroke	44 (61.1%)
	Other	3 (4.2%)
	Don't know/Not sure	4 (5.6%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.12

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	8 (11.1)
	Foot ulcers	2 (2.8)
	Increased risk of broken bones or fractures	2 (2.8)
	Loss of feeling in hands or toes (neuropathy)	1 (1.4)
	Vision loss	25 (34.7)
	Kidney disease	16 (22.2)
	Cardiovascular disease/Stroke	12 (16.7)
	Don't know/Not sure	5 (6.9)
	None	1 (1.4)
	Total Valid Response	72 (100.0)
	Total missing	3

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	10 (13.9%)
	Foot ulcers	12 (16.7%)
	Broken bones or fractures	8 (11.1%)
	Loss of feeling in hands or toes (neuropathy)	11 (15.3%)
	Vision loss	26 (36.1%)
	Irritable bowel disease	6 (8.3%)
	Kidney disease	14 (19.4%)
	Cardiovascular disease/Stroke	15 (20.8%)
	Other	3 (4.2%)
	Don't know/Not sure	6 (8.3%)
	None	22 (30.6%)
	Total Valid Response	72 (100.0%)
	Total missing	3

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	12 (16.7%)
	Multiple times per year	13 (18.1%)
	Once per year	12 (16.7%)
	Only when symptoms arise	22 (30.6%)
	Never	10 (13.9%)
	Don't know/Not sure	3 (4.2%)
	Total Valid Response	72 (100.0%)
	Total missing	3

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	19 (26.4%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	37 (51.4%)
	I do not make any special effort to prevent vision problems	29 (40.3%)
	Total Valid Response	72 (100.0%)
	Total missing	3

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	52 (73.2)
	Public - Private	7 (9.9)
	Private	8 (11.3)
	None	4 (5.6)
	Total Valid Response	71 (100.0)
	Total missing	4

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	7 (10.4)
	Insurance pays total cost	6 (9.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	35 (52.2)
	Out-of-pocket only (pay cash for all care)	14 (20.9)
	Do not use service	2 (3.0)
	Don't know/Not Sure	3 (4.5)
	Total Valid Response	67 (100.0)
	Total missing	8
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	5 (7.2)
	Insurance pays total cost	10 (14.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	36 (52.2)
	Out-of-pocket only (pay cash for all care)	16 (23.2)
	Don't know/Not Sure	2 (2.9)
	Total Valid Response	69 (100.0)
	Total missing	6
Medicines	Care is free	4 (5.9)
	Insurance pays total cost	7 (10.3)
	Insurance and out-of-pocket/cash (e.g. co-pays)	39 (57.4)
	Out-of-pocket only (pay cash for all care)	16 (23.5)
	Don't know/Not Sure	2 (2.9)
	Total Valid Response	68 (100.0)
	Total missing	7
Medical supplies (e.g. blood glucose meter/strips)	Care is free	2 (3.0)
	Insurance pays total cost	4 (6.0)
	Insurance and out-of-	33 (49.3)

Question	Response	Number of Respondents (%)
	pocket/cash (e.g. co-pays)	
	Out-of-pocket only (pay cash for all care)	27 (40.3)
	Do not use service	1 (1.5)
	Total Valid Response	67 (100.0)
	Total missing	8
Procedures	Care is free	3 (4.5)
	Insurance pays total cost	7 (10.4)
	Insurance and out-of-pocket/cash (e.g. co-pays)	39 (58.2)
	Out-of-pocket only (pay cash for all care)	15 (22.4)
	Do not use service	2 (3.0)
	Don't know/Not Sure	1 (1.5)
	Total Valid Response	67 (100.0)
	Total missing	8
Tests/screenings	Care is free	7 (10.4)
	Insurance pays total cost	5 (7.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	38 (56.7)
	Out-of-pocket only (pay cash for all care)	16 (23.9)
	Don't know/Not Sure	1 (1.5)
	Total Valid Response	67 (100.0)
	Total missing	8
Health education	Care is free	10 (15.4)
	Insurance pays total cost	6 (9.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	24 (36.9)
	Out-of-pocket only (pay cash for all care)	14 (21.5)
	Do not use service	6 (9.2)
	Don't know/Not Sure	5 (7.7)
	Total Valid Response	65 (100.0)
	Total missing	10

Question	Response	Number of Respondents (%)
Counseling	Care is free	18 (27.7)
	Insurance pays total cost	2 (3.1)
	Insurance and out-of-pocket/cash (e.g. co-pays)	18 (27.7)
	Out-of-pocket only (pay cash for all care)	16 (24.6)
	Do not use service	4 (6.2)
	Don't know/Not Sure	7 (10.8)
	Total Valid Response	65 (100.0)
	Total missing	10

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	23 (32.4%)
	No	48 (67.6%)
	Total valid response	71 (100.0%)
	Total missing	4

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	55 (76.4%)
	No	17 (23.6%)
	Total valid response	72 (100.0%)
	Total missing	3
How long ago was your last eye exam?	Within the last year	42 (77.8%)
	More than 1 year ago but less than 2 years	8 (14.8%)
	More than 2 years ago but less than 3 years	4 (7.4%)
	Total valid response	54 (100.0%)
	Total missing	21

Question	Response	Number of Respondents (%)
Who did the last exam?	General/Family practitioner	13 (24.1%)
	Eye doctor/Eye clinic	41 (75.9%)
	Total valid response	54 (100.0%)
	Total missing	21

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	50 (70.4%)
	No	16 (22.5%)
	Don't know/Not sure	5 (7.0%)
	Total valid response	71 (100.0%)
	Total missing	4

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	40 (56.3%)
	Every two years	7 (9.9%)
	Less often than every two years	1 (1.4%)
	Only when symptoms occur	17 (23.9%)
	Never	3 (4.2%)
	Don't know/Not sure	3 (4.2%)
	Total valid response	71 (100.0%)
	Total missing	4

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest	They are expensive	17 (24.3%)

Question	Response	Number of Respondents (%)
barriers to eye exams?		
	Eye exams are not available near my home	19 (27.1%)
	Long wait time for appointment	24 (34.3%)
	Long wait time on the day of the visit	17 (24.3%)
	Referral process is complicated or takes too long	10 (14.3%)
	Recommended treatments for eye problems are not available	16 (22.9%)
	Don't know much about my condition	23 (32.9%)
	Fear of treatment/results	5 (7.1%)
	Burden on my family/friends	10 (14.3%)
	Limited access to diabetes specialists	11 (15.7%)
	I'm not likely to have eye complications	9 (12.9%)
	Eye exams are not important	4 (5.7%)
	Too many other things to do or worry about	7 (10.0%)
	Clinics are too small or lack necessary equipment/staff	2 (2.9%)
	Other	10 (14.3%)
	Total valid response	70 (100.0%)
	Total missing	5

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	25 (34.7%)
	No	47 (65.3%)
	Total valid response	72 (100.0%)
	Total missing	3
Has your diabetic eye disease affected your vision?	Yes, slightly	14 (58.3%)
	Yes, significantly	7 (29.2%)
	No	3 (12.5%)

Question	Response	Number of Respondents (%)
	Total valid response	24 (100.0%)
	Total missing	51
Have vision issues caused you to have difficulty with any of the following?	Traveling	16 (76.2%)
	Household responsibilities, such as cooking or cleaning	5 (23.8%)
	Social interactions with family/friends	4 (19.0%)
	Leisure activities/exercise	9 (42.9%)
	Work or keeping a job	9 (42.9%)
	Managing my diabetes	5 (23.8%)
	Other	1 (4.8%)
	None	1 (4.8%)
	Driving (a car/vehicle)	13 (61.9%)
	Total valid response	21 (100.0%)
	Total missing	54

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	18 (75.0%)
	No	5 (20.8%)
	Don't know/Not sure	1 (4.2%)
	Total valid response	24 (100.0%)
	Total missing	51
What treatment did you receive?	Laser	9 (50.0%)
	Injection in the eye (Anti-VEGF)	5 (27.8%)
	Surgery	7 (38.9%)
	Total valid response	18 (100.0%)
	Total missing	57
Did you complete the treatment?	Yes	8 (44.4%)
	No	1 (5.6%)
	Still receiving treatment	9 (50.0%)

Question	Response	Number of Respondents (%)
	Total valid response	18 (100.0%)
	Total missing	57
Do you feel that the treatment worked?	Yes, and vision improved	11 (64.7%)
	Yes, but vision stayed the same	5 (29.4%)
	Still waiting to know	1 (5.9%)
	Total valid response	17 (100.0%)
	Total missing	58
What is/are the reason(s) that you did not complete the treatment?	Appointment times were not convenient	1 (100.0%)
	Total valid response	1 (100.0%)
	Total missing	74
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	1 (20.0%)
	Still waiting for treatment	1 (20.0%)
	Too expensive	2 (40.0%)
	No insurance	1 (20.0%)
	I'm too busy	1 (20.0%)
	Other	1 (20.0%)
	Total valid response	5 (100.0%)
	Total missing	70

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	10 (14.1%)
	No	53 (74.6%)
	Don't know/Not sure	8 (11.3%)
	Total valid response	71 (100.0%)
	Total missing	4
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	8 (80.0%)
	Only treatment when vision loss has occurred	2 (20.0%)

Question	Response	Number of Respondents (%)
	Total valid response	10 (100.0%)
	Total missing	65

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	48 (67.6%)
	Health educator	23 (32.4%)
	Diabetes organization or other health organization	18 (25.4%)
	Family/Friends/Neighbors	16 (22.5%)
	TV/Radio/Newspaper/Magazines	16 (22.5%)
	Internet	16 (22.5%)
	None of the above	8 (11.3%)
	Total valid response	71 (100.0%)
	Total missing	4

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	42 (59.2)
	Male	29 (40.8)
	Total Valid Response	71 (100.0)
	Total missing	4
Please indicate your age	18 - 29	7 (9.3)
	30 - 39	13 (17.3)
	40 - 49	16 (21.3)
	50 - 59	14 (18.7)
	60 - 69	13 (17.3)
	70 - 79	11 (14.7)
	80 - 89	1 (1.3)
	Total Valid Response	75 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	52 (73.2)
	Non-urban setting	19 (26.8)
	Total Valid Response	71 (100.0)
	Total missing	4

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Did not complete primary school	7 (9.9)
	Primary school	11 (15.5)
	Secondary school	16 (22.5)
	College/University	32 (45.1)
	Graduate or post-graduate	5 (7.0)
	Total valid response	71 (100.0)
	Total missing	4

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	34 (47.9)
	Working without pay at home (e.g. housework, farming)	10 (14.1)
	Retired	17 (23.9)
	Not working	10 (14.1)
	Total Valid Response	71 (100.0)
	Total missing	4

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	6 (8.5%)
	Medical assistance	21 (29.6%)

Question	Response	Number of Respondents (%)
	Food assistance	3 (4.2%)
	Housing assistance	7 (9.9%)
	Pension assistance	15 (21.1%)
	None of the above	38 (53.5%)
	Total valid response	71 (100.0%)
	Total missing	4

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	12 (16.9)
	No	59 (83.1)
	Total Valid Response	71 (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	12 (16.9)
	Education	7 (9.9)
	Ethnicity	3 (4.2)
	Gender	7 (9.9)
	Income	31 (43.7)
	Language you speak	3 (4.2)
	Place of birth	6 (8.5)
	Place where you live	17 (23.9)
	Race	3 (4.2)
	Religion	7 (9.9)
	Tribal affiliation	2 (2.8)

Question	Response	Number of Respondents (%)
	None of the above	28 (39.4)
	Total valid response	71 (100.0)
	Total missing	4

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Food	2 (2.8)
	Housing	4 (5.6)
	Money	8 (11.3)
	Health	48 (67.6)
	Family	2 (2.8)
	None of the above	7 (9.9)
	Total Valid Response	71 (100.0)
	Total missing	4

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Very good	3 (4.3%)
	Good	10 (14.5%)
	Total good health	13 (18.8%)
	Fair	47 (68.1%)
	Poor	9 (13.0%)
	Fair or poor health	56 (81.2%)
	Total valid response	69 (100.0%)
	Total missing	6

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical	Any unhealthy	19 (41.3%)

Question	Response	Number of Respondents (%)
health not good	days	
	1-5 unhealthy days	12 (26.1%)
	6-10 unhealthy days	5 (10.9%)
	11-20 unhealthy days	2 (4.3%)
	No unhealthy days	27 (58.7%)
	Total valid response	46 (100.0%)
	Total missing	29

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	17 (37.0%)
	1-5 unhealthy days	9 (19.6%)
	6-10 unhealthy days	5 (10.9%)
	11-20 unhealthy days	1 (2.2%)
	21-30 unhealthy days	2 (4.3%)
	No unhealthy days	29 (63.0%)
	Total valid response	46 (100.0%)
	Total missing	29

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	21 (46.7%)
	1-5 unhealthy days	5 (11.1%)

Question	Response	Number of Respondents (%)
	6-10 unhealthy days	8 (17.8%)
	11-20 unhealthy days	6 (13.3%)
	21-30 unhealthy days	2 (4.4%)
	No unhealthy days	24 (53.3%)
	Total valid response	45 (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	8 (34.8%)
	1-5 unhealthy days	7 (30.4%)
	6-10 unhealthy days	1 (4.3%)
	No unhealthy days	15 (65.2%)
	Total valid response	23 (100.0%)
	Total missing	52

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	18 (29.5%)
	No	43 (70.5%)
	Total valid response	61 (100.0%)
	Total missing	14
Which impairment or health problem, if any, limits your activities?		

Question	Response	Number of Respondents (%)
a) Arthritis/rheumatism	Yes	10 (43.5%)
	No	12 (52.2%)
	Don't know/Not sure	1 (4.3%)
	Total valid response	23 (100.0%)
	Total missing	52
b) Back or neck problem	Yes	12 (54.5%)
	No	10 (45.5%)
	Total valid response	22 (100.0%)
	Total missing	53
c) Fractures, bone/joint injury	Yes	5 (22.7%)
	No	17 (77.3%)
	Total valid response	22 (100.0%)
	Total missing	53
d) Walking problem	Yes	5 (22.7%)
	No	16 (72.7%)
	Don't know/Not sure	1 (4.5%)
	Total valid response	22 (100.0%)
	Total missing	53
e) Lung/breathing problem	Yes	2 (9.1%)
	No	19 (86.4%)
	Don't know/Not sure	1 (4.5%)
	Total valid response	22 (100.0%)
	Total missing	53
f) Hearing problem	Yes	9 (40.9%)
	No	13 (59.1%)
	Total valid response	22 (100.0%)
	Total missing	53

Question	Response	Number of Respondents (%)
g) Eye/vision problem	Yes	12 (52.2%)
	No	11 (47.8%)
	Total valid response	23 (100.0%)
	Total missing	52
h) Heart problem	Yes	5 (22.7%)
	No	16 (72.7%)
	Don't know/Not sure	1 (4.5%)
	Total valid response	22 (100.0%)
	Total missing	53
i) Stroke problem	Yes	6 (27.3%)
	No	16 (72.7%)
	Total valid response	22 (100.0%)
	Total missing	53
j) Hypertension/high blood pressure	Yes	10 (47.6%)
	No	11 (52.4%)
	Total valid response	21 (100.0%)
	Total missing	54
k) Diabetes	Yes	16 (66.7%)
	No	6 (25.0%)
	Don't know/Not sure	1 (4.2%)
	Refused	1 (4.2%)
	Total valid response	24 (100.0%)
	Total missing	51
l) Cancer	No	22 (100.0%)
	Total valid response	22 (100.0%)
	Total missing	53
m) Mental or emotional health	Yes	7 (31.8%)

Question	Response	Number of Respondents (%)
	No	13 (59.1%)
	Don't know/Not sure	2 (9.1%)
	Total valid response	22 (100.0%)
	Total missing	53

PT 1.2

Analysis Sets	Number of Respondents (%)
All valid respondents	86 (100.0%)
Included in Provider Analysis Set (PAS)	86 (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	86
Included in the Eye Care Professional Set (Eye Specialist)	26 (30.2%)
Excluded in the Eye Care Professional Set (Eye Specialist)	60 (69.8%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	60
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	86 (100.0%)
Primary Care Provider	1 (1.2%)
Diabetes Specialist Provider	10 (11.6%)
Eye Care Professional	26 (30.2%)
Ophthalmologist	26 (30.2%)

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

PT 1.4

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your specialty?	General primary care/Family practitioner	1 (100.0%)	0 (0.0%)	2 (7.7%)	3 (3.5%)
	Diabetes specialist	0 (0.0%)	10 (100.0%)	2 (7.7%)	12 (14.0%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	17 (65.4%)	17 (19.8%)
	Optometrist	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Retinal specialist	0 (0.0%)	0 (0.0%)	12 (46.2%)	12 (14.0%)
	Nurse	0 (0.0%)	0 (0.0%)	0 (0.0%)	39 (45.3%)
	Health educator	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (7.0%)
	None of the above	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (8.1%)
	Total valid response	1 (100.0%)	10 (100.0%)	26 (100.0%)	86 (100.0%)
	Total missing	0	0	0	0

PT 1.5

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
How long have you been practicing in this profession?	Total valid response (n)	1	10	25	85
	Mean	16.0	13.5	12.3	12.6
	SD	.	10.0	8.9	9.8
	Median	16.0	12.5	10.0	10.0
	Min.	16	0	1	0
	Max.	16	35	30	35
	Total missing	0	0	1	1

PT 2.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your main practice setting?	Diabetes clinic/practice	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	2 (8.3%)	2 (2.5%)
	General medical clinic/practice	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Hospital	0 (0.0%)	9 (100.0%)	22 (91.7%)	72 (90.0%)
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (6.3%)
	Total Valid Response	1 (100.0%)	9 (100.0%)	24 (100.0%)	80 (100.0%)
	Total missing	0	1	2	6

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	0 (0.0%)	9 (100.0%)	23 (100.0%)	74 (93.7%)
	Non-urban setting	1 (100.0%)	0 (0.0%)	0 (0.0%)	5 (6.3%)
	Total Valid Response	1 (100.0%)	9 (100.0%)	23 (100.0%)	79 (100.0%)
	Total missing	0	1	3	7

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	0 (0.0%)	7 (77.8%)	15 (62.5%)	40 (50.6%)
	Private	1 (100.0%)	1 (11.1%)	1 (4.2%)	7 (8.9%)
	Non profit	0 (0.0%)	1 (11.1%)	4 (16.7%)	17 (21.5%)
	Combined/mixed	0 (0.0%)	0 (0.0%)	4 (16.7%)	15 (19.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	1 (100.0%)	9 (100.0%)	24 (100.0%)	79 (100.0%)
	Total missing	0	1	2	7

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	1 (100.0%)	9 (100.0%)	24 (100.0%)	74 (93.7%)
	Yes, limited by age	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Yes, limited to persons in the military or veterans	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Yes, limited to persons with health insurance	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Yes, limited to low income or uninsured persons	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Yes, limited to persons who pay out-of-pocket	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Yes, other	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	Total valid response	1 (100.0%)	9 (100.0%)	24 (100.0%)	79 (100.0%)
	Total missing	0	1	2	7

PT 2.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the average wait time for an appointment in your	Less than 1 week	1 (100.0%)	4 (50.0%)	12 (57.1%)	27 (49.1%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
main practice?					
	More than 1 week but less than 1 month	0 (0.0%)	0 (0.0%)	1 (4.8%)	2 (3.6%)
	More than 3 months but less than 6 months	0 (0.0%)	1 (12.5%)	0 (0.0%)	1 (1.8%)
	Do not take appointments	0 (0.0%)	2 (25.0%)	1 (4.8%)	7 (12.7%)
	Other	0 (0.0%)	1 (12.5%)	2 (9.5%)	8 (14.5%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	5 (23.8%)	10 (18.2%)
	Total Valid Response	1 (100.0%)	8 (100.0%)	21 (100.0%)	55 (100.0%)
	Total missing	0	2	5	31

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	8	21	50
	Mean	15	130.6	98.1	101.4
	SD	.	130.8	75.8	134.2
	Median	15	85	100	50
	Min.	15	5	15	0
	Max.	15	320	300	700
	Total missing	0	2	5	36
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	1	8	16	41
	Mean	5	64.8	25.4	36.1
	SD	.	34.7	17.3	33.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Median	5	75	20	20
	Min.	5	10	5	0
	Max.	5	98	70	98
	Total missing	0	2	10	45

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%)	1 (12.5%)	1 (4.8%)	3 (5.6%)
	Pay a reduced/subsidized rate	0 (0.0%)	1 (12.5%)	1 (4.8%)	2 (3.7%)
	Pay out-of-pocket (full fees)	0 (0.0%)	4 (50.0%)	8 (38.1%)	16 (29.6%)
	Pay through insurance	1 (100.0%)	5 (62.5%)	4 (19.0%)	14 (25.9%)
	Patient pays some, insurance pays some	0 (0.0%)	3 (37.5%)	20 (95.2%)	42 (77.8%)
	Other	0 (0.0%)	0 (0.0%)	4 (19.0%)	5 (9.3%)
	Total valid response	1 (100.0%)	8 (100.0%)	21 (100.0%)	54 (100.0%)
	Total missing	0	2	5	32

PT 2.8

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In addition to your main practice, do you work in another practice setting?	Yes				2 (3.6%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	No	1 (100.0%)	8 (100.0%)	21 (100.0%)	53 (96.4%)
	Total valid response	1 (100.0%)	8 (100.0%)	21 (100.0%)	55 (100.0%)
	Total missing		2	5	31
In which other practice setting(s) do you work?	General medical clinic/practice				1 (50.0%)
	Eye clinic/practice				1 (50.0%)
	Total valid response				2 (100.0%)
	Total missing	1	10	26	84
In which sector(s) is(are) the practice(s)?	Combined/mixed				1 (100.0%)
	Total valid response				1 (100.0%)
	Total missing	1	10	26	85
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes				1 (50.0%)
	No				1 (50.0%)
	Total valid response				2 (100.0%)
	Total missing	1	10	26	84

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%)	8 (100.0%)	18 (100.0%)	47 (100.0%)
		Total valid	1	7 (87.5%)	16 (88.9%)	43

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		numeric response (n)	(100.0%)			(91.5%)
		Mean	10.0	67.7	67.8	70.9
		SD		132.0	127.4	123.2
		Median	10.0	20.0	5.0	10.0
		Min	10	0	0	0
		Max	10	365	365	365
		Total missing	0	3	10	43
	Total valid response		1 (100.0%)	8 (100.0%)	18 (100.0%)	47 (100.0%)
	Total missing			2	8	39
HbA1c	Yes			8 (100.0%)	13 (81.3%)	34 (85.0%)
		Total valid numeric response (n)	0 (0.0%)	7 (87.5%)	12 (75.0%)	31 (77.5%)
		Mean		55.0	32.7	26.7
		SD		136.7	104.7	90.3
		Median		4.0	2.0	4.0
		Min		0	0	0
		Max		365	365	365
		Total missing	1	3	14	55
	No		1 (100.0%)		3 (18.8%)	6 (15.0%)
	Total valid response		1 (100.0%)	8 (100.0%)	16 (100.0%)	40 (100.0%)
	Total missing			2	10	46
Urine check	Yes		1 (100.0%)	8 (100.0%)	12 (80.0%)	37 (88.1%)
		Total valid numeric	1 (100.0%)	7 (87.5%)	11 (73.3%)	34 (81.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		response (n)				
		Mean	5.0	54.1	36.8	25.7
		SD		137.1	108.9	86.2
		Median	5.0	3.0	3.0	3.0
		Min	5	0	0	0
		Max	5	365	365	365
		Total missing	0	3	15	52
	No				3 (20.0%)	5 (11.9%)
	Total valid response		1 (100.0%)	8 (100.0%)	15 (100.0%)	42 (100.0%)
	Total missing			2	11	44
Weight check	Yes			8 (100.0%)	15 (88.2%)	40 (93.0%)
		Total valid numeric response (n)	0 (0.0%)	7 (87.5%)	14 (82.4%)	37 (86.0%)
		Mean		55.3	29.2	26.8
		SD		136.6	96.7	82.8
		Median		4.0	1.5	4.0
		Min		0	0	0
		Max		365	365	365
		Total missing	1	3	12	49
	No		1 (100.0%)		2 (11.8%)	3 (7.0%)
	Total valid response		1 (100.0%)	8 (100.0%)	17 (100.0%)	43 (100.0%)
	Total missing			2	9	43
Blood pressure check	Yes		1 (100.0%)	8 (100.0%)	18 (100.0%)	45 (100.0%)
		Total valid	1	7 (87.5%)	16 (88.9%)	41

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		numeric response (n)	(100.0%)			(91.1%)
		Mean	365.0	61.0	31.9	46.4
		SD		134.3	89.9	107.0
		Median	365.0	12.0	4.5	6.0
		Min	365	0	0	0
		Max	365	365	365	365
		Total missing	0	3	10	45
	Total valid response		1 (100.0%)	8 (100.0%)	18 (100.0%)	45 (100.0%)
	Total missing			2	8	41
Foot check	Yes			7 (87.5%)	7 (50.0%)	25 (65.8%)
		Total valid numeric response (n)	0 (0.0%)	6 (75.0%)	5 (35.7%)	21 (55.3%)
		Mean		4.7	3.6	5.9
		SD		7.6	4.3	11.0
		Median		1.5	2.0	1.0
		Min		0	0	0
		Max		20	10	48
		Total missing	1	4	21	65
	No		1 (100.0%)	1 (12.5%)	7 (50.0%)	13 (34.2%)
	Total valid response		1 (100.0%)	8 (100.0%)	14 (100.0%)	38 (100.0%)
	Total missing			2	12	48
Eye examination - Un-dilated	Yes			7 (100.0%)	16 (94.1%)	35 (83.3%)
		Total valid numeric	0 (0.0%)	6 (85.7%)	14 (82.4%)	32

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		response (n)				(76.2%)
		Mean		61.7	2.4	13.3
		SD		148.6	3.3	64.2
		Median		1.0	1.0	1.0
		Min		0	0	0
		Max		365	12	365
		Total missing	1	4	12	54
	No		1 (100.0%)		1 (5.9%)	7 (16.7%)
	Total valid response		1 (100.0%)	7 (100.0%)	17 (100.0%)	42 (100.0%)
	Total missing			3	9	44
Eye examination - Optical Coherence Tomography	Yes			5 (83.3%)	14 (87.5%)	26 (66.7%)
		Total valid numeric response (n)	0 (0.0%)	4 (66.7%)	12 (75.0%)	23 (59.0%)
		Mean		91.8	32.3	33.7
		SD		182.2	104.8	104.6
		Median		1.0	1.0	1.0
		Min		0	0	0
		Max		365	365	365
		Total missing	1	6	14	63
	No		1 (100.0%)	1 (16.7%)	2 (12.5%)	13 (33.3%)
	Total valid response		1 (100.0%)	6 (100.0%)	16 (100.0%)	39 (100.0%)
	Total missing			4	10	47

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Eye examination - Fundoscopy	Yes			6 (85.7%)	20 (100.0%)	39 (86.7%)
		Total valid numeric response (n)	0 (0.0%)	5 (71.4%)	18 (90.0%)	36 (80.0%)
		Mean		74.2	23.3	22.8
		SD		162.6	85.3	84.2
		Median		1.0	2.0	1.0
		Min		1	0	0
		Max		365	365	365
		Total missing	1	5	8	50
	No		1 (100.0%)	1 (14.3%)		6 (13.3%)
	Total valid response		1 (100.0%)	7 (100.0%)	20 (100.0%)	45 (100.0%)
	Total missing			3	6	41
Eye examination - Fluorescein Angiography	Yes			5 (71.4%)	20 (100.0%)	31 (73.8%)
		Total valid numeric response (n)	0 (0.0%)	3 (42.9%)	18 (90.0%)	27 (64.3%)
		Mean		122.0	21.6	28.8
		SD		210.4	85.7	96.9
		Median		1.0	1.0	1.0
		Min		0	0	0
		Max		365	365	365
		Total missing	1	7	8	59
	No		1 (100.0%)	2 (28.6%)		11 (26.2%)
	Total valid		1 (100.0%)	7 (100.0%)	20 (100.0%)	42 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	response					
	Total missing			3	6	44
Eye examination - Lipid check	Yes			5 (83.3%)	8 (53.3%)	17 (47.2%)
		Total valid numeric response (n)	0 (0.0%)	4 (66.7%)	8 (53.3%)	16 (44.4%)
		Mean		92.5	47.8	48.3
		SD		181.7	128.2	123.7
		Median		2.0	1.5	2.0
		Min		1	0	0
		Max		365	365	365
		Total missing	1	6	18	70
	No		1 (100.0%)	1 (16.7%)	7 (46.7%)	19 (52.8%)
	Total valid response		1 (100.0%)	6 (100.0%)	15 (100.0%)	36 (100.0%)
	Total missing			4	11	50

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%)	6 (85.7%)	13 (68.4%)	32 (71.1%)
	Diet/nutrition	1 (100.0%)	6 (85.7%)	11 (57.9%)	30 (66.7%)
	Exercise/physical activity	1 (100.0%)	5 (71.4%)	7 (36.8%)	23 (51.1%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Medicines	1 (100.0%)	7 (100.0%)	15 (78.9%)	38 (84.4%)
	Foot care and inspection	0 (0.0%)	4 (57.1%)	6 (31.6%)	16 (35.6%)
	Blood pressure	1 (100.0%)	6 (85.7%)	13 (68.4%)	33 (73.3%)
	Eye care and exams	0 (0.0%)	7 (100.0%)	18 (94.7%)	38 (84.4%)
	Lipid check	0 (0.0%)	6 (85.7%)	7 (36.8%)	19 (42.2%)
	None of the above	0 (0.0%)	0 (0.0%)	1 (5.3%)	1 (2.2%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)
	Total missing	0	3	7	41

PT 2.11

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	0 (0.0%)	1 (14.3%)	5 (26.3%)	11 (24.4%)
	Yes, but information on eye complications is not sufficient	0 (0.0%)	4 (57.1%)	4 (21.1%)	14 (31.1%)
	Yes, but no information on eye complications is included	0 (0.0%)	1 (14.3%)	1 (5.3%)	3 (6.7%)
	No written information is available for patients	1 (100.0%)	1 (14.3%)	6 (31.6%)	12 (26.7%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	3 (15.8%)	5 (11.1%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing	0	3	7	41

PT 2.12

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines available in your main practice for the management of diabetes?	Yes, available and used by staff	1 (100.0%)	5 (71.4%)	9 (47.4%)	30 (66.7%)
	Yes, available but not used by staff	0 (0.0%)	1 (14.3%)	1 (5.3%)	2 (4.4%)
	Not available	0 (0.0%)	1 (14.3%)	3 (15.8%)	6 (13.3%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	6 (31.6%)	7 (15.6%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)
	Total missing	0	3	7	41

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	1 (100.0%)	2 (28.6%)	11 (57.9%)	25 (55.6%)
	Yes, available but not used by staff	0 (0.0%)	0 (0.0%)	1 (5.3%)	1 (2.2%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Not available	0 (0.0%)	4 (57.1%)	2 (10.5%)	10 (22.2%)
	Don't know/Not sure	0 (0.0%)	1 (14.3%)	5 (26.3%)	9 (20.0%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)
	Total missing	0	3	7	41

PT 2.14

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type I?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	0 (0.0%)	2 (10.5%)	2 (4.4%)
	Mean			5.0	5.0
	SD			0.0	0.0
	Median			5.0	5.0
	Min			5	5
	Max			5	5
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	1 (5.3%)	1 (2.2%)
	Mean			12.0	12.0
	SD				
	Median			12.0	12.0
	Min			12	12
	Max			12	12
	As soon as they are diagnosed	1 (100.0%)	5 (71.4%)	8 (42.1%)	25 (55.6%)
	When a patient		1 (14.3%)	4 (21.1%)	6

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	reports eye/vision problems				(13.3%)
	No standard practice, timing varies case by case		1 (14.3%)	2 (10.5%)	6 (13.3%)
	Don't know/Not sure			2 (10.5%)	5 (11.1%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)
	Total missing		3	7	41
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type II?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.2%)
	Mean				50.0
	SD				
	Median				50.0
	Min				50
	Max				50
	As soon as they are diagnosed	1 (100.0%)	5 (71.4%)	10 (52.6%)	27 (60.0%)
	When a patient reports eye/vision problems			5 (26.3%)	5 (11.1%)
	No standard practice, timing		2 (28.6%)	2 (10.5%)	8 (17.8%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	varies case by case				
	Don't know/Not sure			2 (10.5%)	4 (8.9%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	45 (100.0%)
	Total missing		3	7	41

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%)	6 (85.7%)	10 (52.6%)	27 (61.4%)
	Every two years	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (4.5%)
	Only when symptoms are present	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.3%)
	Other	0 (0.0%)	1 (14.3%)	6 (31.6%)	8 (18.2%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	2 (10.5%)	6 (13.6%)
	Total Valid Response	0	7 (100.0%)	19 (100.0%)	44 (100.0%)
	Total missing	1	3	7	42

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes		7 (100.0%)	14 (73.7%)	34 (77.3%)
	No			5 (26.3%)	10 (22.7%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response		7 (100.0%)	19 (100.0%)	44 (100.0%)
	Total missing	1	3	7	42
Where do you screen patients?	In clinic		5 (71.4%)	11 (78.6%)	24 (70.6%)
	Outreach		1 (14.3%)		2 (5.9%)
	Other		1 (14.3%)	5 (35.7%)	10 (29.4%)
	Total valid response		7 (100.0%)	14 (100.0%)	34 (100.0%)
	Total missing	1	3	12	52

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 (57.1%)	12 (63.2%)	25 (56.8%)
	Patient's age	0 (0.0%)	2 (28.6%)	10 (52.6%)	18 (40.9%)
	Patient's gender	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (4.5%)
	Presence of comorbidities such as hypertension, etc.	0 (0.0%)	3 (42.9%)	12 (63.2%)	23 (52.3%)
	High glucose levels	0 (0.0%)	4 (57.1%)	11 (57.9%)	21 (47.7%)
	Ability or inability to pay	0 (0.0%)	1 (14.3%)	4 (21.1%)	10 (22.7%)
	Insurance restrictions	0 (0.0%)	1 (14.3%)	3 (15.8%)	7 (15.9%)
	Patient educational level	0 (0.0%)	0 (0.0%)	4 (21.1%)	6 (13.6%)
	Patient adherence to recommendations	0 (0.0%)	3 (42.9%)	7 (36.8%)	16 (36.4%)
	None of the above	0 (0.0%)	0 (0.0%)	1 (5.3%)	3 (6.8%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Not applicable	0 (0.0%)	0 (0.0%)	2 (10.5%)	4 (9.1%)
	Total valid response	0	7 (100.0%)	19 (100.0%)	44 (100.0%)
	Total missing	1	3	7	42

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%)	3 (50.0%)	13 (68.4%)	23 (53.5%)
	Proximity to care	0 (0.0%)	0 (0.0%)	7 (36.8%)	9 (20.9%)
	Long wait time for appointment	0 (0.0%)	1 (16.7%)	3 (15.8%)	7 (16.3%)
	Long wait time on the day of visit	0 (0.0%)	0 (0.0%)	2 (10.5%)	6 (14.0%)
	Referral process	0 (0.0%)	2 (33.3%)	2 (10.5%)	8 (18.6%)
	Recommended treatments are not available	0 (0.0%)	1 (16.7%)	0 (0.0%)	3 (7.0%)
	Lack of knowledge and/or awareness	0 (0.0%)	4 (66.7%)	15 (78.9%)	27 (62.8%)
	Patients fear of treatment/results	0 (0.0%)	0 (0.0%)	10 (52.6%)	12 (27.9%)
	Patients they are a burden on family/friends	0 (0.0%)	1 (16.7%)	7 (36.8%)	11 (25.6%)
	Limited access to diabetes specialists	0 (0.0%)	2 (33.3%)	6 (31.6%)	10 (23.3%)
	Limited access to eye specialists	0 (0.0%)	3 (50.0%)	5 (26.3%)	13 (30.2%)
	Patients feel eye complications are	0 (0.0%)	2 (33.3%)	11 (57.9%)	19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	unlikely				(44.2%)
	Patients feel eye exams are not important	0 (0.0%)	2 (33.3%)	11 (57.9%)	18 (41.9%)
	Patients have competing responsibilities and priorities	0 (0.0%)	1 (16.7%)	4 (21.1%)	5 (11.6%)
	Clinic too small or lack necessary equipment/staff	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (4.7%)
	Other	0 (0.0%)	0 (0.0%)	2 (10.5%)	4 (9.3%)
	Total valid response	0	6 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	4	7	43

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 (42.9%)	5 (26.3%)	18 (41.9%)
	No	0 (0.0%)	4 (57.1%)	10 (52.6%)	20 (46.5%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	4 (21.1%)	5 (11.6%)
	Total Valid Response	0	7 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	3	7	43

PT 2.20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you share relevant patient	Yes	0 (0.0%)	4 (57.1%)	13 (68.4%)	30

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
information with other health care professionals involved in the patients care e.g. his or her general practitioner, ophthalmologist, podiastrist?					(69.8%)
	No	0 (0.0%)	2 (28.6%)	3 (15.8%)	7 (16.3%)
	Don't know/Not sure	0 (0.0%)	1 (14.3%)	3 (15.8%)	6 (14.0%)
	Total Valid Response	0	7 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	3	7	43

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	18 - 29			1 (5.3%)	6 (14.0%)
	30 - 39		3 (42.9%)	12 (63.2%)	20 (46.5%)
	40 - 49		3 (42.9%)	4 (21.1%)	14 (32.6%)
	50 - 59			2 (10.5%)	2 (4.7%)
	60 - 69		1 (14.3%)		1 (2.3%)
	Total valid response		7 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	3	7	43
What is your gender?	Female		4 (57.1%)	15 (78.9%)	34 (79.1%)
	Male		3 (42.9%)	4 (21.1%)	9 (20.9%)
	Total valid response		7 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	3	7	43
What is your highest level of	Secondary School				1 (2.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
education completed?					
	College/University			3 (15.8%)	13 (30.2%)
	Graduate or advanced degree (e.g. PhD, MD, etc)		7 (100.0%)	16 (84.2%)	29 (67.4%)
	Total valid response		7 (100.0%)	19 (100.0%)	43 (100.0%)
	Total missing	1	3	7	43

PT 4.1

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	16
	Mean	21.9
	SD	19.8
	Median	12.5
	Min	0
	Max	60
	Total missing	10

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	16
	Mean	17.0
	SD	20.2
	Median	8.0
	Min	0
	Max	70
	Total missing	10

PT 4.3

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	Less than 1 week	8 (50.0%)
	More than 1 week but less than 1 month	1 (6.3%)
	Other	3 (18.8%)
	Don't know/Not sure	4 (25.0%)
	Total Valid Response	16 (100.0%)
	Total missing	10

PT 4.4

Question	Response	Ophthalmologist
From the time a patient is screened, what is the average length of time he/she waits for diagnosis?	Less than 1 week	3 (18.8%)
	More than 1 week but less than 1 month	1 (6.3%)
	Other	2 (12.5%)
	Don't know/Not sure	5 (31.3%)
	There is not wait, diagnosis is given when screened	5 (31.3%)
	Total Valid Response	16 (100.0%)
	Total missing	10

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	2 (13.3%)
		Available locally	3 (20.0%)
		Available in practice	12 (80.0%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	10 (71.4%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Mean	0.9
		SD	0.3
		Median	1.0
		Min	0
		Max	1
		Don't know/not sure	3 (21.4%)
		Not applicable	1 (7.1%)
		Total valid response	14 (100.0%)
		Total missing	12
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	10 (76.9%)
		Mean	0.9
		SD	0.3
		Median	1.0
		Min	0
		Max	1
		Don't know/not sure	3 (23.1%)
		Total valid response	13 (100.0%)
		Total missing	13
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	11 (78.6%)
		Mean	1.2
		SD	1.0
		Median	1.0
		Min	0
		Max	4
		Don't know/not sure	3 (21.4%)
		Total valid response	14 (100.0%)
		Total missing	12

Type of Treatment	Question	Response/time	Ophthalmologist
Anti-VEGF therapies	Is the treatment available?	Available within country	2 (13.3%)
		Available locally	3 (20.0%)
		Available in practice	12 (80.0%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	10 (71.4%)
		Mean	1.0
		SD	0.5
		Median	1.0
		Min	0
		Max	2
		Don't know/not sure	3 (21.4%)
		Not applicable	1 (7.1%)
		Total valid response	14 (100.0%)
		Total missing	12
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	10 (76.9%)
		Mean	1.0
		SD	0.5
		Median	1.0
		Min	0
		Max	2
		Don't know/not sure	3 (23.1%)
		Total valid response	13 (100.0%)
		Total missing	13
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	11 (78.6%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Mean	1.7
		SD	1.5
		Median	1.0
		Min	0
		Max	4
		Don't know/not sure	3 (21.4%)
		Total valid response	14 (100.0%)
		Total missing	12
Intravitreal steroid	Is the treatment available?	Available within country	2 (13.3%)
		Available locally	3 (20.0%)
		Available in practice	12 (80.0%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	10 (71.4%)
		Mean	1.0
		SD	0.5
		Median	1.0
		Min	0
		Max	2
		Don't know/not sure	3 (21.4%)
		Not applicable	1 (7.1%)
		Total valid response	14 (100.0%)
		Total missing	12
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	10 (76.9%)
		Mean	1.0
		SD	0.5

Type of Treatment	Question	Response/time	Ophthalmologist
		Median	1.0
		Min	0
		Max	2
		Don't know/not sure	3 (23.1%)
		Total valid response	13 (100.0%)
		Total missing	13
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	10 (71.4%)
		Mean	1.7
		SD	1.8
		Median	1.0
		Min	0
		Max	6
		Don't know/not sure	4 (28.6%)
		Total valid response	14 (100.0%)
		Total missing	12
Uncomplicated vitrectomy	Is the treatment available?	Available within country	2 (13.3%)
		Available locally	3 (20.0%)
		Available in practice	12 (80.0%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	11 (73.3%)
		Mean	1.7
		SD	1.1
		Median	2.0
		Min	0
		Max	4

Type of Treatment	Question	Response/time	Ophthalmologist
		Don't know/not sure	3 (20.0%)
		Not applicable	1 (6.7%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	11 (78.6%)
		Mean	1.7
		SD	1.1
		Median	2.0
		Min	0
		Max	4
		Don't know/not sure	3 (21.4%)
		Total valid response	14 (100.0%)
		Total missing	12
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	9 (60.0%)
		Mean	1.7
		SD	1.1
		Median	2.0
		Min	0
		Max	4
		Don't know/not sure	5 (33.3%)
		Not applicable	1 (6.7%)
		Total valid response	15 (100.0%)
		Total missing	11
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	2 (13.3%)
		Available locally	4 (26.7%)
		Available in	11 (73.3%)

Type of Treatment	Question	Response/time	Ophthalmologist
		practice	
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	11 (73.3%)
		Mean	1.8
		SD	1.1
		Median	2.0
		Min	0
		Max	4
		Don't know/not sure	3 (20.0%)
		Not applicable	1 (6.7%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	11 (73.3%)
		Mean	1.8
		SD	1.1
		Median	2.0
		Min	0
		Max	4
		Don't know/not sure	4 (26.7%)
		Total valid response	15 (100.0%)
		Total missing	11
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	9 (60.0%)
		Mean	1.9
		SD	1.1
		Median	2.0

Type of Treatment	Question	Response/time	Ophthalmologist
		Min	0
		Max	4
		Don't know/not sure	5 (33.3%)
		Not applicable	1 (6.7%)
		Total valid response	15 (100.0%)
		Total missing	11

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	12 (75.0%)
	No	4 (25.0%)
	Total valid response	16 (100.0%)
	Total missing	10
Who administer it?	Another provider in your practice	2 (50.0%)
	Other	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	22

PT 4.7

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	11 (91.7%)
	Patient's age	8 (66.7%)
	Patient's gender	1 (8.3%)
	Presence of comorbidities such as hypertension, etc.	11 (91.7%)
	High glucose levels	11 (91.7%)
	Ability or inability to pay	7 (58.3%)
	Insurance restrictions	5 (41.7%)
	Patient educational level	5 (41.7%)
	Patient adherence to	7 (58.3%)

Question	Response	Ophthalmologist
	recommendations	
	Total valid response	12 (100.0%)
	Total missing	14

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Both	15 (93.8%)
	Other	1 (6.3%)
	Total Valid Response	16 (100.0%)
	Total missing	10

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy undilated	4 (25.0%)
	Fundoscopy dilated	15 (93.8%)
	Retinal photo	10 (62.5%)
	Optical Coherence Tomography	10 (62.5%)
	Fluorescein Angiography	11 (68.8%)
	Other	1 (6.3%)
	Total valid response	16 (100.0%)
	Total missing	10

PT 4.10

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	In time for screening	4 (25.0%)
	When visual problems have already occurred	9 (56.3%)
	Too late for effective treatment	3 (18.8%)
	Total Valid Response	16 (100.0%)
	Total missing	10

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	13 (81.3%)
	No	3 (18.8%)
	Total valid response	16 (100.0%)
	Total missing	10
If yes, When was your last training?	Five or more years ago	1 (7.7%)
	Greater than 1 year ago but less than 5 years	3 (23.1%)
	Within the past year	9 (69.2%)
	Total valid response	13 (100.0%)
	Total missing	13

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	13 (81.3%)
	No	3 (18.8%)
	Total Valid Response	16 (100.0%)
	Total missing	10

PT 4.13

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Health fairs for all	3 (18.8%)
	Health fairs for people with diabetes	5 (31.3%)
	Mobile screening centers	7 (43.8%)
	At vision centers	3 (18.8%)
	Not done	2 (12.5%)
	Don't know/Not sure	4 (25.0%)
	Total valid response	16 (100.0%)

Question	Response	Ophthalmologist
	Total missing	10

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	6 (37.5%)
	Late diagnosis	11 (68.8%)
	Referral pathways	7 (43.8%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	11 (68.8%)
	No universal guidelines on referral/screening	8 (50.0%)
	No universal guidelines on how to treat	2 (12.5%)
	No universal guideline on when to treat	1 (6.3%)
	Current available therapies not effective	4 (25.0%)
	Government/insurance not able to cover patient costs	5 (31.3%)
	Multi-disciplinary team integration is poor	4 (25.0%)
	Ineffective screening services	4 (25.0%)
	Total valid response	16 (100.0%)
	Total missing	10

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Amputation	7 (15.6%)	1 (5.9%)	2 (20.0%)
	Foot ulcers	7 (15.6%)	3 (17.6%)	2 (20.0%)
	Kidney disease	7 (15.6%)	6 (35.3%)	1 (10.0%)
	Loss of feeling in hands or toes (neuropathy)	6 (13.3%)	4 (23.5%)	1 (10.0%)
	Vision loss	10 (22.2%)	11 (64.7%)	5 (50.0%)
	Broken bones or	7 (15.6%)	0 (0.0%)	1 (10.0%)

Question	Response	Without DED (%)	With DED (%)	With DME (%)
	fractures			
	Irritable bowel disease	5 (11.1%)	0 (0.0%)	1 (10.0%)
	Cardiovascular disease/Stroke	10 (22.2%)	5 (29.4%)	0 (0.0%)
	Other	3 (6.7%)	0 (0.0%)	0 (0.0%)
	None	21 (46.7%)	0 (0.0%)	1 (10.0%)
	Don't know/Not sure	4 (8.9%)	0 (0.0%)	2 (20.0%)
	Total Valid Response	45 (100.0%)	17 (100.0%)	10 (100.0%)
	Total missing	2	1	0

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

EXP 2

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Limited in any way in any activities because of impairment or health problem	10 (22.7%)	4 (23.5%)	4 (40.0%)
Impairment or health problem			
Diabetes	9 (60.0%)	5 (83.3%)	2 (66.7%)
Back or neck problem	8 (57.1%)	2 (40.0%)	2 (66.7%)
Eye/vision problem	7 (50.0%)	2 (40.0%)	3 (75.0%)
Hypertension/high blood pressure	6 (46.2%)	2 (40.0%)	2 (66.7%)
Arthritis/rheumatism	6 (42.9%)	2 (40.0%)	2 (50.0%)
Hearing problem	4 (28.6%)	2 (40.0%)	3 (100.0%)
Stroke problem	4 (28.6%)	1 (20.0%)	1 (33.3%)
Mental or emotional health	4 (28.6%)	2 (40.0%)	1 (33.3%)
Fractures, bone/joint injury	3 (21.4%)	2 (40.0%)	0 (0.0%)
Walking problem	3 (21.4%)	2 (40.0%)	0 (0.0%)
Heart problem	3 (21.4%)	2 (40.0%)	0 (0.0%)
Lung/breathing problem	1 (7.1%)	1 (20.0%)	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.

EXP 3

Health Status	Without DED (%)	With DED (%)	With DME (%)
Self-rated health: Good	9 (21.4%)	1 (5.9%)	3 (30.0%)
Self-rated health: Poor	33 (78.6%)	16 (94.1%)	7 (70.0%)
Physically unhealthy days	12 (41.4%)	5 (38.5%)	2 (50.0%)
Mentally unhealthy days	12 (37.5%)	3 (27.3%)	2 (66.7%)
Unhealthy days	14 (46.7%)	5 (41.7%)	2 (66.7%)
Activity limitation days	4 (26.7%)	2 (33.3%)	2 (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	62 (86.1%)	11 (78.6%)	49 (92.5%)
	Oral medicine	62 (86.1%)	9 (64.3%)	50 (94.3%)
	Exercise	46 (63.9%)	7 (50.0%)	37 (69.8%)
	Insulin	41 (56.9%)	7 (50.0%)	32 (60.4%)
	Natural/Herbal medicine	9 (12.5%)	1 (7.1%)	8 (15.1%)

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	20 (45.5%)	9 (52.9%)	5 (50.0%)
	Working without pay at home (e.g. housework, farming)	4 (9.1%)	2 (11.8%)	4 (40.0%)
	Retired	15 (34.1%)	2 (11.8%)	0 (0.0%)
	Not working	5 (11.4%)	4 (23.5%)	1 (10.0%)
	Total Valid Response	44 (100.0%)	17 (100.0%)	10 (100.0%)
	Total missing	3	1	0
Do you receive assistance from the government?	Income assistance	4 (9.1%)	1 (5.9%)	1 (10.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Medical assistance	14 (31.8%)	3 (17.6%)	4 (40.0%)
	Food assistance	2 (4.5%)	0 (0.0%)	1 (10.0%)
	Housing assistance	5 (11.4%)	2 (11.8%)	0 (0.0%)
	Pension assistance	13 (29.5%)	1 (5.9%)	1 (10.0%)
	None of the above	22 (50.0%)	11 (64.7%)	5 (50.0%)
	Total valid response	44 (100.0%)	17 (100.0%)	10 (100.0%)
	Total missing	3	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	5 (11.4%)	3 (17.6%)	4 (40.0%)
	No	39 (88.6%)	14 (82.4%)	6 (60.0%)
	Total Valid Response	44 (100.0%)	17 (100.0%)	10 (100.0%)
	Total missing	3	1	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
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	6 (60.0%)	6 (100.0%)	2 (66.7%)
	Working without pay at home (e.g. housework, farming)	1 (10.0%)	0 (0.0%)	1 (33.3%)
	Retired	1 (10.0%)	0 (0.0%)	0 (0.0%)
	Not working	2 (20.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	10 (100.0%)	6 (100.0%)	3 (100.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Income assistance	1 (10.0%)	0 (0.0%)	0 (0.0%)
	Medical assistance	5 (50.0%)	2 (33.3%)	1 (33.3%)
	Food assistance	1 (10.0%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Housing assistance	2 (20.0%)	2 (33.3%)	0 (0.0%)
	Pension assistance	2 (20.0%)	0 (0.0%)	0 (0.0%)
	None of the above	5 (50.0%)	2 (33.3%)	2 (66.7%)
	Total valid response	10 (100.0%)	6 (100.0%)	3 (100.0%)
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	3 (30.0%)	1 (16.7%)	0 (0.0%)
	No	7 (70.0%)	5 (83.3%)	3 (100.0%)
	Total Valid Response	10 (100.0%)	6 (100.0%)	3 (100.0%)
	Total missing	1	0	0

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

EXP 5.3: Age group 40-59 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	11 (64.7%)	3 (60.0%)	3 (50.0%)
	Working without pay at home (e.g. housework, farming)	1 (5.9%)	1 (20.0%)	2 (33.3%)
	Retired	3 (17.6%)	0 (0.0%)	0 (0.0%)
	Not working	2 (11.8%)	1 (20.0%)	1 (16.7%)
	Total Valid Response	17 (100.0%)	5 (100.0%)	6 (100.0%)
	Total missing	1	1	0
Do you receive assistance from the government?	Income assistance	1 (5.9%)	1 (20.0%)	1 (16.7%)
	Medical assistance	3 (17.6%)	1 (20.0%)	2 (33.3%)
	Food assistance	0 (0.0%)	0 (0.0%)	1 (16.7%)
	Pension assistance	3 (17.6%)	1 (20.0%)	1 (16.7%)
	None of the above	11 (64.7%)	3 (60.0%)	3 (50.0%)
	Total valid response	17 (100.0%)	5 (100.0%)	6 (100.0%)
	Total missing	1	1	0

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Did you have trouble paying for food at anytime during the past year?	Yes	1 (5.9%)	0 (0.0%)	4 (66.7%)
	No	16 (94.1%)	5 (100.0%)	2 (33.3%)
	Total Valid Response	17 (100.0%)	5 (100.0%)	6 (100.0%)
	Total missing	1	1	0

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

EXP 5.4: Age group 60-79 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	3 (18.8%)	0 (0.0%)	0 (0.0%)
	Working without pay at home (e.g. housework, farming)	2 (12.5%)	1 (16.7%)	1 (100.0%)
	Retired	10 (62.5%)	2 (33.3%)	0 (0.0%)
	Not working	1 (6.3%)	3 (50.0%)	0 (0.0%)
	Total Valid Response	16 (100.0%)	6 (100.0%)	1 (100.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Income assistance	1 (6.3%)	0 (0.0%)	0 (0.0%)
	Medical assistance	5 (31.3%)	0 (0.0%)	1 (100.0%)
	Food assistance	1 (6.3%)	0 (0.0%)	0 (0.0%)
	Housing assistance	3 (18.8%)	0 (0.0%)	0 (0.0%)
	Pension assistance	7 (43.8%)	0 (0.0%)	0 (0.0%)
	None of the above	6 (37.5%)	6 (100.0%)	0 (0.0%)
	Total valid response	16 (100.0%)	6 (100.0%)	1 (100.0%)
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	1 (6.3%)	2 (33.3%)	0 (0.0%)
	No	15 (93.8%)	4 (66.7%)	1 (100.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Total Valid Response	16 (100.0%)	6 (100.0%)	1 (100.0%)
	Total missing	1	0	0

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

EXP 5.5: Age group 80+ years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Retired	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (100.0%)	0 (0.0%)	0 (0.0%)
Do you receive assistance from the government?	Income assistance	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Medical assistance	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Pension assistance	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	1 (100.0%)	0	0
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?	No	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (100.0%)	0 (0.0%)	0 (0.0%)

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

EXP 6

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
All respondents		75 (100%)	15 (20.0%)	53 (70.7%)	18 (24.0%)	10 (13.3%)
Gender	Male	29 (40.8%)	7 (24.1%)	20 (69.0%)	6 (20.7%)	3 (10.3%)
	Female	42 (59.2%)	7 (16.7%)	32 (76.2%)	11 (26.2%)	7 (16.7%)
	Total Missing	4	1	1	1	0
Age	18-39 yrs	20 (26.7%)	6 (30.0%)	11 (55.0%)	6 (30.0%)	3 (15.0%)

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
	40-59 yrs	30 (40.0%)	8 (26.7%)	20 (66.7%)	6 (20.0%)	6 (20.0%)
	60-79 yrs	24 (32.0%)	1 (4.2%)	21 (87.5%)	6 (25.0%)	1 (4.2%)
	80 yrs and over	1 (1.3%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	8 (10.8%)	5 (62.5%)	2 (25.0%)	2 (25.0%)	1 (12.5%)
	1 - 5 years ago	27 (36.5%)	3 (11.1%)	19 (70.4%)	5 (18.5%)	4 (14.8%)
	6 - 10 years ago	22 (29.7%)	3 (13.6%)	19 (86.4%)	7 (31.8%)	2 (9.1%)
	11 - 15 years ago	10 (13.5%)	1 (10.0%)	9 (90.0%)	2 (20.0%)	1 (10.0%)
	16 - 20 years ago	3 (4.1%)	0 (0.0%)	3 (100.0%)	1 (33.3%)	2 (66.7%)
	21 years ago or longer	3 (4.1%)	2 (66.7%)	1 (33.3%)	1 (33.3%)	0 (0.0%)
	Don't know/Not sure	1 (1.4%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	0	0	0	0
Control of Diabetes	Controlled	36 (50.0%)	5 (13.9%)	27 (75.0%)	8 (22.2%)	3 (8.3%)
	Not controlled	35 (48.6%)	8 (22.9%)	26 (74.3%)	9 (25.7%)	7 (20.0%)
	Don't know/Not sure	1 (1.4%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	3	1	0	1	0

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

EXP 7

Question	Response	With DED n (%)	With DME n (%)
Have you had any treatment for diabetic eye disease?	Yes	12 (70.6%)	6 (85.7%)
	No	4 (23.5%)	1 (14.3%)
	Don't know/Not sure	1 (5.9%)	0 (0.0%)
	Total valid response	17 (100.0%)	7 (100.0%)

Question	Response	With DED n (%)	With DME n (%)
	Total missing	1	3
What treatment did you receive?	Laser	4 (33.3%)	5 (83.3%)
	Anti-VEGF	5 (41.7%)	0 (0.0%)
	Surgery	6 (50.0%)	1 (16.7%)
	Total valid response	12 (100.0%)	6 (100.0%)
	Total missing	6	4
Did you complete the treatment?	Yes	6 (50.0%)	2 (33.3%)
	No	0 (0.0%)	1 (16.7%)
	Still receiving treatment	6 (50.0%)	3 (50.0%)
	Total valid response	12 (100.0%)	6 (100.0%)
	Total missing	6	4
Do you feel that the treatment worked?	Yes, and vision improved	9 (75.0%)	2 (40.0%)
	Yes, but vision stayed the same	3 (25.0%)	2 (40.0%)
	Still waiting to know	0 (0.0%)	1 (20.0%)
	Total valid response	12 (100.0%)	5 (100.0%)
	Total missing	6	5
What is/are the reason(s) that you did not complete the treatment?	Appointment times were not convenient	0 (0.0%)	1 (100.0%)
	Total valid response	0 (0.0%)	1 (100.0%)
	Total missing	18	9
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	1 (25.0%)	0 (0.0%)
	Still waiting for treatment	1 (25.0%)	0 (0.0%)
	Too expensive	1 (25.0%)	1 (100.0%)
	No insurance	1 (25.0%)	0 (0.0%)
	I'm too busy	0 (0.0%)	1 (100.0%)
	Other	1 (25.0%)	0 (0.0%)
	Total valid response	4 (100.0%)	1 (100.0%)
	Total missing	14	9

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

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