# DR Barometer
## Shifting the needle

The Diabetic Retinopathy Barometer Report

# Saudi Arabia

# 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 Saudi Arabia.

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 DED, 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 contributions that they can make to family and community are not compromised.

## Background

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

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

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

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

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

## Study Populations

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

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

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

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

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

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

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

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

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

# Introduction
# Saudi Arabia Study

## Demographic Characteristics[1]

Saudi Arabia is the sixth most populous country of the Middle East with an estimated population of approximately 32.1 million.

Currently it is estimated that some 28% of the population is under the age of 15 years (9.1 million) while only 3% is over the age of 65 years (958,000).

By 2050, the population distribution in Saudi Arabia is expected to increase by 43%, and with that population ageing will be realised in a significant way. Those aged 15 years and younger will only make up ~19% of the country population while those aged 65 years or older will make up ~15.5% of Saudi Arabia's population.

This means that in just over 30 years the population aged 65 years or older will sextuple (increase by ~636%) and reach an all-time high of approximately 7 million.

## Diabetes Profile[2]

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

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

Saudi Arabia has the fourth highest number of people living with diabetes in the Middle East and North Africa region at ~3.5 million (2,682.2-3,897.5‡), which accounts for some 10% of people living with diabetes in this region. It is important to note that Saudi Arabia has the highest diabetes prevalence rate in the region at 17.6%.

As mentioned above, Saudi Arabia's diabetes national prevalence (20 – 79 years) is 17.6% (13.5-19.6‡) and the diabetes age-adjusted comparative prevalence is 20% (15.7-22.5‡).

## Study Populations: Saudi Arabia

As reported by 44 adults with diabetes in Saudi Arabia, 14% of respondents reported to have been diagnosed with DED and a further 9.1% with DME.

Twenty-four health care professionals completed the survey in Saudi Arabia. Of these, three were diabetes specialist providers (13%), 15 were ophthalmologists (63%), and three were primary care providers (13%). The remaining respondents were either optometrists, nurses, health educators or other types of professionals.

# The DR Barometer Study:
## Saudi Arabia Overview

The DR Barometer study was conducted in 41 countries. In Saudi Arabia, 44 adults with diabetes and 24 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.

## 51%

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

## 30%

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

**DR:** Diabetic Retinopathy
**DME:** Diabetic Macular Edema

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IFA    IAPB    International Diabetes Federation    BAYER

**86%**

of patients with vision loss due to DR or DME said that their condition made everyday activities, **such as driving,** working and completing basic household tasks difficult and in some cases impossible

**50%**

of those with DME experienced days of **poor physical and mental health**
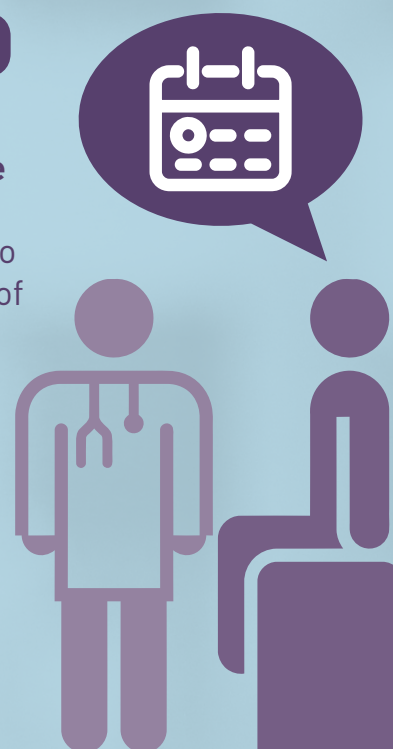
**28%**

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

**10%**

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

# Saudi Arabia
# DR Barometer Findings:
## Adults with Diabetes

### Key Demographic Characteristics

Forty-four adults with diabetes (patients) completed the patients' survey in Saudi Arabia: 22% were female and 78% were male. Ninety-five percent lived in an urban setting and 5.3% resided in a non-urban setting (see Appendix Table 4.2).

The education levelS of all respondents were as follows: 2.6% did not complete primary school, 5.3% were educated to a primary school level, 21% to a secondary school level, 50% to a college or university level, and 21% to a graduate or post-graduate level (see Appendix Table 4.3).

Sixty-six percent of all respondents were working for pay and 5.3% stated they were not working (see Appendix Table 4.4).

Most respondents (71%) were aged between 18 and 39 years (25% were 40-59 years and 5% were 60-79 years). Ninety-six percent were of traditional working age (18- 59 years) (see Table 1).

Of the respondents in Saudi Arabia, 39% had been diagnosed with type 1 diabetes and 39% with type 2 diabetes. Of concern is the finding that 23% of respondents were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Fourteen percent of respondents reported being diagnosed with DED and a further 9.1% (n=4) with DME.

Thirty-four percent of respondents were diagnosed with diabetes within the last year, 1 - 5 years ago (36%), 6 - 10 years ago (14%), 11 - 15 years ago (9.1%), 16 - 20 years ago (2.3%), and 21 years ago or more (2.3%) (see Appendix Table 2.2).

A younger population tended to be associated with type 1 diabetes and the older population with type 2 diabetes. Amongst 18 to 39-year-olds, 48% had type 1 and 32% had type 2 diabetes. In the 40-59 age group, 9.1% had type 1 and 55% had type 2 diabetes, 50% of 60-79-year-olds had type 1 diabetes and 50% had type 2.

In people aged 18-39 years, 16% had DED and 13% had DME. Only one respondent (9.1%) in the 40-59 age group had DED and none of the respondents had DME. Likewise, none of the respondents in the 60-79 age group had been diagnosed with either DED or DME.

A notable trend noted was that the longer the time since diabetes was diagnosed the greater the likelihood for DME to be detected. In the first year since diagnosis of diabetes, 20% of respondents were diagnosed with DED and a further 6.7% with DME. The proportion of those diagnosed with DME increased to 19% in those diagnosed with diabetes between one and five years ago, whereas those diagnosed with DED decreased to 6.3%.

The majority (83%) of respondents reported that their diabetes was well controlled and within this subgroup, 18% had DED and 12% 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** | | 44 (100.0%) | 17 (38.6%) | 17 (38.6%) | 6 (13.6%) | 4 (9.1%) |
| **Gender** | Male | 29 (78.4%) | 11 (37.9%) | 10 (34.5%) | 3 (10.3%) | 1 (3.4%) |
| | Female | 8 (21.6%) | 4 (50.0%) | 2 (25.0%) | 2 (25.0%) | 3 (37.5%) |
| | Total Missing | 7 | 2 | 5 | 1 | 0 |
| **Age** | 18-39 yrs. | 31 (70.5%) | 15 (48.4%) | 10 (32.3%) | 5 (16.1%) | 4 (12.9%) |
| | 40-59 yrs. | 11 (25.0%) | 1 (9.1%) | 6 (54.5%) | 1 (9.1%) | 0 (0.0%) |
| | 60-79 yrs. | 2 (4.5%) | 1 (50.0%) | 1 (50.0%) | 0 (0.0%) | 0 (0.0%) |
| **Time since diagnosis** | Within the last year | 15 (34.1%) | 8 (53.3%) | 4 (26.7%) | 3 (20.0%) | 1 (6.7%) |
| | 1 - 5 yrs. | 16 (36.4%) | 7 (43.8%) | 5 (31.3%) | 1 (6.3%) | 3 (18.8%) |
| | 6 - 10 yrs. | 6 (13.6%) | 0 (0.0%) | 5 (83.3%) | 0 (0.0%) | 0 (0.0%) |
| | 11 - 15 yrs. | 4 (9.1%) | 1 (25.0%) | 2 (50.0%) | 1 (25.0%) | 0 (0.0%) |
| | 16 - 20 yrs. | 1 (2.3%) | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| | 21 yrs. plus | 1 (2.3%) | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Don't know/ Not sure | 1 (2.3%) | 0 (0.0%) | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) |
| **Control of Diabetes** | Controlled | 33 (82.5%) | 15 (45.5%) | 11 (33.3%) | 6 (18.2%) | 4 (12.1%) |
| | Not controlled | 7 (17.5%) | 1 (14.3%) | 3 (42.9%) | 0 (0.0%) | 0 (0.0%) |
| | Total Missing | 4 | 1 | 3 | 0 | 0 |

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

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

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

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

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

## Knowledge and Management of Diabetes

Eighty-two percent of those surveyed saw a health care professional for their diabetes, with 50% seeing a diabetes specialist for the management of the condition (average number of visits was 6.9 times per year) and 44% seeing a general or family doctor (average number of visits was 6.1 times per year) (see Appendix Table 2.3.1 and 2.3.2).

Adults with diabetes were informed about their condition through a variety of channels. Seventy-four percent received information from a doctor or nurse, 56% from the internet, and 42% from family, friends or neighbours (see Table 2 and Appendix Table 2.4).

### Table 2: Source of information regarding diabetes

| Information Source | All Respondents (n=43) |
| --- | --- |
| Doctor or nurse | 32 (74.4%) |
| Internet | 24 (55.8%) |
| Family/Friends/Neighbours | 18 (41.9%) |
| TV/Radio/Newspaper/Magazines | 17 (39.5%) |
| Nutritionist or dietician | 16 (37.2%) |
| Pharmacist | 15 (34.9%) |
| Social media (e.g. Facebook, Twitter, blogs) | 12 (27.9%) |
| Health educator | 8 (18.6%) |
| Diabetes organisation or other health organisation | 8 (18.6%) |
| None of the above | 1 (2.3%) |

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 75% managed their condition with diet, 44% with oral medicine, and 31% with exercise. Of the respondents with type 2 diabetes, 65% reported that they managed their diabetes with diet, 59% with oral medicine, 41% with exercise, 24% with insulin, and 12% with natural or herbal medicine.

Twenty-three percent of respondents were enrolled in diabetes management programmes and 89% of these said the programme included information on education on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

The nature and frequency of tests that people with diabetes experienced included blood glucose checks and eye checks. For the respondents that had eye checks (75%), these occurred at the following intervals less than 6 months (40%), 6 - 12 months (20%) and greater than 12 months (13%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: it was too hard to eat the right things (63%), the high cost of care (38%), there were too many other things to do (38%), travel to their regular doctor or specialist was difficult (35%), and there were long wait times for an appointment to see their doctor or specialist (35%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (60%), support groups (50%), health education and information (50%), support from family or friends (45%), and the coordination of healthcare and services by a professional (35%) were identified as important to improving the management of their diabetes. Eight percent of respondents said that none of the services listed helped them to better manage their diabetes (see Appendix Table 2.10).

## Nature and Information about Complications

Fifty-five percent of respondents were aware of amputation as a consequence of diabetic complications. Over half acknowledge that vision loss (53%), followed by neuropathy (50%), kidney disease (45%), and foot ulcers (43%), was associated with diabetes (see Appendix Table 2.11).

Patients were most concerned about vision loss and cardiovascular disease or stroke (23%) followed by amputation (18%), neuropathy (10%), and kidney disease (10%) (see Appendix Table 2.12).

Thirty-nine percent of respondents reported that they had no complications of diabetes. However, of those who did have complications 26% had neuropathy, amputation (18%), foot ulcers (13%), kidney disease (7.7%), and vision loss (5.1%) (see Figure 1 and Appendix Table 2.13).

Though the number of respondents with DED and DME was small, all reported additional complications with their condition (see Table 3 and Appendix EXP 1).

Aside from vision loss, there was an increase in the frequency of people with DED and DME experiencing complications compared to those without DED. For example neuropathy 21% without DED vs 50% DED and 25% DME. Likewise 3.9% without DED had an amputation compared with 33% with DED and 75% with DME.

### Figure 1: Presence of complications
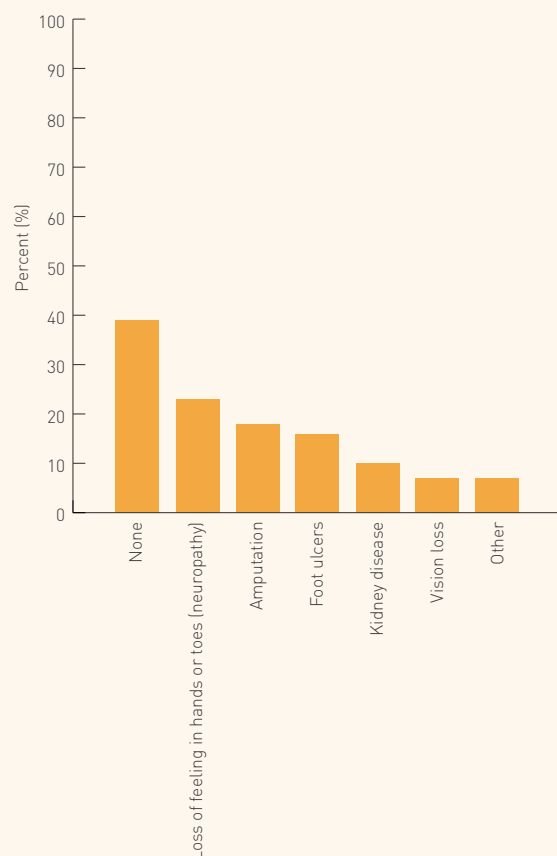
## Table 3: Presence of complications without DED, with DED or DME

| Complication | Without DED (n=29) | With DED (n=6) | With DME (n=4) |
|---|---|---|---|
| Any | 14 (48.3%) | 6 (100.0%) | 4 (100.0%) |
| Loss of feeling in hands or toes (neuropathy) | 6 (20.7%) | 3 (50.0%) | 1 (25.0%) |
| Amputation | 2 (6.9%) | 2 (33.3%) | 3 (75.0%) |
| Kidney disease | 1 (3.4%) | 2 (33.3%) | 0 (0.0%) |
| Vision loss | 1 (3.4%) | 0 (0.0%) | 1 (25.0%) |
| Foot ulcers | 4 (13.8%) | 0 (0.0%) | 1 (25.0%) |
| Cardiovascular disease/Stroke | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| Other | 1 (3.4%) | 1 (16.7%) | 0 (0.0%) |
| None | 15 (51.7%) | 0 (0.0%) | 0 (0.0%) |

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

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

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

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

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

## Information about Diabetic Eye Disease and Diabetic Macular Edema

Eighty-five percent of respondents said that eye complications were discussed with their health care professional. Notwithstanding this 28% either had never discussed eye complications (10%) or discussions only took place when symptoms arose (18%). The frequency of regular discussions varied from every visit (23%), multiple times a year (31%) and once a year (13%) (see Appendix Table 2.14).

Sixty percent of patients said that they did what they could to prevent vision problems (e.g. get routine screenings, visit specialists). Significantly nearly half (48%) thought that vision problems were a normal part of ageing and 23% did not make any special effort to prevent vision problems (see Appendix Table 2.15).

Fifty-eight percent of all respondents received information about DR and DME with the doctor or nurse being the most common source (42%). A very concerning finding was that almost half (42%) of respondents did not receive such information from any of the sources listed (see Appendix Table 3.9).

## Table 4: Source of information about DR and DME

| Source | All respondents (n=38) |
|---|---|
| Doctor/Nurse | 16 (42.1%) |
| Health educator | 7 (18.4%) |
| Internet | 7 (18.4%) |
| TV/Radio/Newspaper/Magazines | 6 (15.8%) |
| Diabetes organisation or other health organisation | 5 (13.2%) |
| Family/Friends/Neighbours | 5 (13.2%) |
| None of the above | 16 (42.1%) |

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

Just over half (55%) of the respondents reported having an eye exam for DED, with 76% having an eye exam within the last year and a further 19% more than one year ago but less than two years ago (see Appendix Table 3.2). Twenty-five percent of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1).

Fifty percent of those surveyed thought they should have their eyes examined for DED once a year, 18% said it should only happen every two years, 11% only when symptoms occur, one respondent less often than every two years, and four respondents who said it should not occur at all (see Appendix Table 3.4).

The biggest barriers to eye exams were the high cost of eye exams (51%), the long wait times for an appointment (44%), and for more than one third (39%) the eye exams were not available near their home (see Table 5 and Appendix Table 3.5).

## Table 5: Barriers to eye examinations

| Identified Barriers | All Respondents (n=39) |
|---|---|
| They are expensive | 20 (51.3%) |
| Long wait time for appointment | 17 (43.6%) |
| Eye exams are not available near my home | 15 (38.5%) |
| Long wait time on the day of the visit | 14 (35.9%) |
| Don't know much about my condition | 9 (23.1%) |
| I'm not likely to have eye complications | 5 (12.8%) |
| Referral process is complicated or takes too long | 4 (10.3%) |
| Fear of treatment/results | 4 (10.3%) |
| Burden on my family/friends | 4 (10.3%) |
| Too many other things to do or worry about | 4 (10.3%) |
| Clinics are too small or lack necessary equipment/staff | 4 (10.3%) |
| Recommended treatments for eye problems are not available | 3 (7.7%) |
| Limited access to diabetes specialists | 2 (5.1%) |
| Eye exams are not important | 1 (2.6%) |
| Other | 1 (2.6%) |

## Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately in people with DED and in those with DME. For those with DED 33% (n=2) received treatment with the most common being anti-VEGF therapy (100%) and laser treatment (50%) (see Table 6).

Those who had not received treatment (67%) said that their doctor either did not recommend treatment or they were waiting for treatment.

Three respondents with DME had received (and completed) treatment with the most common being laser (67%). All felt that treatment had been successful and either their vision had improved (67%, n=2) or had stayed the same (33%, n=1).

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

### Table 6: Treatment characteristics of patients with DED and DME

| Question | Response | With DED (n=6) | With DME (n=3) |
|---|---|---|---|
| Have you had any treatment for diabetic eye disease? | Yes | 2 (33.3%) | 3 (100.0%) |
| | No | 4 (66.7%) | 0 (0.0%) |
| What treatment did you receive? | Laser | 1 (50.0%) | 2 (66.7%) |
| | Anti-VEGF | 2 (100.0%) | 0 (0.0%) |
| | Surgery | 0 (0.0%) | 1 (33.3%) |
| Did you complete the treatment? | Yes | 1 (50.0%) | 3 (100.0%) |
| | Still receiving treatment | 1 (50.0%) | 0 (0.0%) |
| Do you feel that the treatment worked? | Yes, and vision improved | 1 (50.0%) | 2 (66.7%) |
| | Yes, but vision stayed the same | 1 (50.0%) | 1 (33.3%) |
| What are the reason(s) that you have not had treatment for diabetic eye disease? | My doctor did not recommend any treatment | 2 (66.7%) | 0 (0.0%) |
| | Still waiting for treatment | 2 (66.7%) | 0 (0.0%) |
| | Too expensive | 1 (33.3%) | 0 (0.0%) |
| | I'm too busy | 1 (33.3%) | 0 (0.0%) |

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

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

NB [3]: Not all respondents answered all questions in the survey; percentages are calculated from non-missing responses to the survey question.

NB [4]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

## Impact of Diabetic Eye Disease and Diabetic Macular Edema

Seventy-seven percent of those diagnosed with DED or DME reported that their vision was affected (33% significantly, 44% slightly) (see Appendix Table 3.6).

Eighty-six percent of these respondents said that vision issues impacted their daily lives in various ways such as difficulty in travelling (43%), being involved with leisure activities or exercise (29%), undertaking household responsibilities, such as cooking or cleaning (14%), having social interactions with family or friends (14%), working or keeping a job (14%), and driving a vehicle (14%) (see Table 7).

### Table 7: Activities affected through vision impairment and loss

| Have vision issues caused you to have difficulty with any of the following? | All Respondents (n=7) |
|---|---|
| Travelling | 3 (42.9%) |
| Leisure activities/exercise | 2 (28.6%) |
| Household responsibilities, such as cooking or cleaning | 1 (14.3%) |
| Social interactions with family/ friends | 1 (14.3%) |
| Work or keeping a job | 1 (14.3%) |
| Driving (a car/vehicle) | 1 (14.3%) |
| None | 1 (14.3%) |

Even though patients with vision complications overall reported difficulties (14%) with work or keeping a job, 60% of those with DED and 25% with DME were in paid employment compared with 72% of those without DED (see Table 8 and Appendix EXP 5.1).

Seventy-four percent of those surveyed did not receive government assistance while 16% (n=6) received income assistance (see Appendix Table 4.5). The proportion of respondents without DED who received assistance from the government was 21% and this increased to 40% in those with DED and 50% with DME.

A concerning 45% of respondents said they had trouble paying for food at any time during the past year (see Appendix Table 4.6). Some respondents (68%) felt that their access to health care was also affected, and 26% said it was by income (see Appendix Table 4.7).

Thirty-seven percent of respondents said they worried about their health, 16% worried about family and 5.3% were not worried about any of the items in the survey (see Appendix Table 4.8).

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

| Question | Response | Without DED (n=29) | With DED (n=5) | With DME (n=4) |
|---|---|---|---|---|
| Are you currently working? | Working for pay | 21 (72.4%) | 3 (60.0%) | 1 (25.0%) |
| | Working without pay at home (e.g. housework, farming) | 4 (13.8%) | 1 (20.0%) | 1 (25.0%) |
| | Student | 3 (10.3%) | 1 (20.0%) | 1 (25.0%) |
| | Not working | 1 (3.4%) | 0 (0.0%) | 1 (25.0%) |
| **Question** | **Response** | **Without DED (n=29)** | **With DED (n=5)** | **With DME (n=4)** |
| Do you receive assistance from the government? | Income assistance | 4 (13.8%) | 0 (0.0%) | 2 (50.0%) |
| | Medical assistance | 3 (10.3%) | 1 (20.0%) | 0 (0.0%) |
| | Food assistance | 3 (10.3%) | 1 (20.0%) | 0 (0.0%) |
| | Housing assistance | 1 (3.4%) | 0 (0.0%) | 0 (0.0%) |
| | Pension assistance | 0 (0.0%) | 1 (20.0%) | 0 (0.0%) |
| | None of the above | 23 (79.3%) | 3 (60.0%) | 2 (50.0%) |
| **Question** | **Response** | **Without DED (n=29)** | **With DED (n=5)** | **With DME (n=4)** |
| Did you have trouble paying for food at any time during the past year? | Yes | 12 (41.4%) | 1 (20.0%) | 4 (100.0%) |
| | No | 17 (58.6%) | 4 (80.0%) | 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]: 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).

Twenty percent of people with DED reported their self-rated health as poor compared with 18% of those without DED. None of the respondents with DME reported their self-rated health as poor.

The impact of DED on a person's mental wellbeing was evident in the findings. Some 75% of those with DED reported having mentally unhealthy days compared with 58% of those without DED.

Three-quarters of those with DME experienced limitations to their daily activities as a result of poor health compared with 17% of those without DED. No respondents with DED experience limitations. Where health or an associated condition impacted daily activities, the primary limitations were the management of their diabetic condition, back or neck problems and mental wellbeing (see Appendix Table EXP 2).

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

| Health Status | Without DED | With DED | With DME |
|---|---|---|---|
| Self-rated health: Good | 23 (82.1%) | 4 (80.0%) | 3 (100.0%) |
| Self-rated health: Poor | 5 (17.9%) | 1 (20.0%) | 0 (0.0%) |
| Physically unhealthy days | 13 (61.9%) | 1 (33.3%) | 2 (50.0%) |
| Mentally unhealthy days | 14 (58.3%) | 3 (75.0%) | 2 (50.0%) |
| Unhealthy days | 18 (81.8%) | 3 (75.0%) | 2 (50.0%) |
| Activity limitation days | 11 (52.4%) | 2 (50.0%) | 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.

# Saudi Arabia
# DR Barometer Findings:
## Health Care Professionals

### Key Demographic Characteristics

There were 24 health care professionals who answered at least one of the survey questions in Saudi Arabia. Of these, three were primary care providers (13%), three were diabetes specialist providers (13%) and 15 were ophthalmologists (63%). The remaining respondents were optometrists, 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 15 years, with the ophthalmologist group practicing for an average of 18 years (see Appendix PT 1.5).

Health care professionals were well educated (84% with graduate or advanced degree); 47% were female and 53% male and varied in age, 37% being in 40 - 49 year and 50-59 years age groups (see Table 10 and Appendix PT 3.1).

### Table 10: Summary of key characteristics of health care professionals

| Group | Subgroup | All Respondents | Primary Care Provider | Diabetes Specialist | Ophthalmologist |
|---|---|---|---|---|---|
| **All respondents** | | 24 (100.0%) | 3 (12.5%) | 3 (12.5%) | 15 (62.5%) |
| **Age group** | 30 - 39 yrs. | 4 (21.1%) | 0 (0.0%) | 0 (0.0%) | 4 (33.3%) |
| | 40 - 49 yrs. | 7 (36.8%) | 2 (100.0%) | 3 (100.0%) | 2 (16.7%) |
| | 50 - 59 yrs. | 7 (36.8%) | 0 (0.0%) | 0 (0.0%) | 5 (41.7%) |
| | 80 - 89 yrs. | 1 (5.3%) | 0 (0.0%) | 0 (0.0%) | 1 (8.3%) |
| **Gender** | Female | 9 (47.4%) | 2 (100.0%) | 1 (33.3%) | 4 (33.3%) |
| | Male | 10 (52.6%) | 0 (0.0%) | 2 (66.7%) | 8 (66.7%) |
| **Education** | Secondary School | 1 (5.3%) | 0 (0.0%) | 0 (0.0%) | 1 (8.3%) |
| | College/University | 2 (10.5%) | 0 (0.0%) | 1 (33.3%) | 0 (0.0%) |
| | Graduate or advanced degree (e.g. PhD, MD, etc.) | 16 (84.2%) | 2 (100.0%) | 2 (66.7%) | 11 (91.7%) |

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

## Clinical Practice Characteristics

Forty-four percent of all providers had their main practice setting in a hospital and for ophthalmologists only it was hospital (67%) and eye clinic (33%) (see Appendix PT 2.1). Fifty-nine percent of providers worked in an urban setting (see Appendix PT 2.2). Ophthalmologists worked mainly in the government (73%), private (20%), and combined or mixed (6.7%) sector (see Appendix PT 2.3).

Health care professionals reported that 91% of patients do not pay for services, 9.5% pay a reduced or subsidised rate and 9.5% pay out-of-pocket (full fees). The situation was similar for ophthalmologists, whereby 86% of patients do not pay for services, 14% pay a reduced or subsidised rate for services, and 14% pay out-of-pocket (full fees) for services (see Appendix PT 2.7).

On average, all providers see 68 patients per week and 57% of these patients had diabetes. The findings were similar for ophthalmologists who saw an average of 65 patients per week and an estimated 68% of their patients had diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was most commonly more than three months but less than six months (29%), or more than one week but less than one month (24%) (see Appendix PT 2.5).

For an appointment with an ophthalmologist the average wait time more than three months but less than six months in 36% of practices. In a further 29% of practices, the average wait time was more than one week but less than one month.

### Table 11: Average wait times to schedule an appointment

| Wait Time Intervals | All Respondents (n=21) | Ophthalmologist (n=14) |
|---|---|---|
| Less than 1 week | 1 (4.8%) | 0 (0.0%) |
| More than 1 week but less than 1 month | 5 (23.8%) | 4 (28.6%) |
| More than 1 month but less than 2 months | 2 (9.5%) | 1 (7.1%) |
| More than 2 months but less than 3 months | 2 (9.5%) | 1 (7.1%) |
| More than 3 months but less than 6 months | 6 (28.6%) | 5 (35.7%) |
| Six or more months | 3 (14.3%) | 3 (21.4%) |
| Do not take appointments | 1 (4.8%) | 0 (0.0%) |
| Other | 1 (4.8%) | 0 (0.0%) |

## Patient Education Information

A wide range of topics related to diabetes and its management were reported to be 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
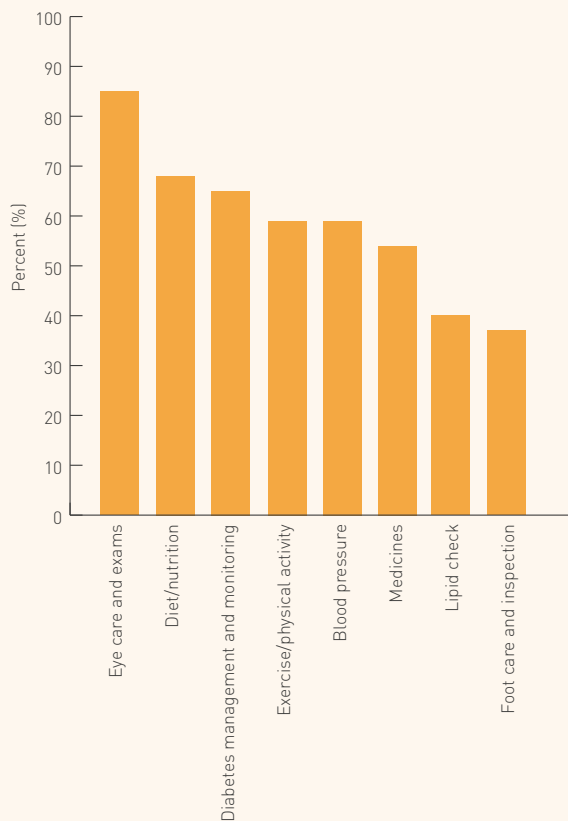


Health care professionals stated that written information about diabetes was available yet the adequacy of that related to eye complications varies.

Sixty percent of all providers said that they had sufficient information about eye complications; 15% had information on diabetes but information on eye complications was not sufficient. Overall, 25% of health care professionals had no written information available at all (see Table 12 and Appendix PT 2.11).

Just over two-thirds of ophthalmologists (69%) had written information about diabetes and the information on eye complications was sufficient. Of concern is the finding that 31% of ophthalmologists had no written information available at all.

# Guidelines and Protocols

Fifty-eight percent of all health care professionals, including 50% of ophthalmologists, had written protocols for the management of diabetes available which were used by staff however, over one quarter (26%) of providers had no protocols (see Appendix PT 2.12).

Sixty percent of health care professionals, including 54% of ophthalmologists, had written protocols for the detection and management of diabetes-related vision issues available, which were used by staff. Of concern is the finding that 30% of providers, and 39% of ophthalmologists only, did not have any protocols (see Table 12 and Appendix PT 2.13).

## Table 12: Availability and use of information and protocols

| Question | Response | All Respondents (n=20) | Ophthalmologist (n=13) |
|---|---|---|---|
| Is there written information about diabetes available for patients in your main practice? | Yes, and information on eye complications is sufficient | 12 (60.0%) | 9 (69.2%) |
| | Yes, but information on eye complications is not sufficient | 3 (15.0%) | 0 (0.0%) |
| | No written information is available for patients | 5 (25.0%) | 4 (30.8%) |
| **Question** | **Response** | **All Respondents (n=20)** | **Ophthalmologist (n=13)** |
| 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 | 12 (60.0%) | 7 (53.8%) |
| | Yes, available but not used by staff | 2 (10.0%) | 1 (7.7%) |
| | Not available | 6 (30.0%) | 5 (38.5%) |

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

## Screening Protocols and Barriers in the Care Pathway

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

For those with type 1 diabetes 53% of all providers reported the initial eye exam should occur at predetermined number of years (average 5.5 years). Seventy-five percent of all providers said that as initial eye exam for patients with type 2 diabetes should be at time of diagnosis (see Appendix PT 2.14).

Overall, ninety percent of health care professionals stated that follow-up eye examinations should be conducted every year. Similarly, 92% of the ophthalmologist subgroup recommended eye exams annually (see Appendix PT 2.15).

Ninety-two percent of ophthalmologists stated that they screen patients for DR and 85% of all health care professionals screen patients for DR (see Appendix PT 2.16).

Across all health care professionals, 58% reported that they send appointment reminders while 42% do not (see Appendix PT 2.19).

Seventy-four percent of all health care professionals reported that they share relevant patient information with other health care professionals, only 58% of ophthalmologists said that information was shared (see Appendix PT 2.20).

The most common patient characteristics influencing the referral process for eye complications were: diabetes duration (85%), high glucose levels (70%), presence of comorbidities such as hypertension (65%), the patient's age (40%), and a patient's ability to adhere to recommendations (25%) (see Appendix PT 2.17).

The findings were similar for ophthalmologists. The most common patient characteristics influencing vision care or vision referrals were: diabetes duration (92%), presence of comorbidities such as hypertension (77%), high glucose levels (77%), the patient's age (46%), and the patient's gender (31%).

As reported by all health care professionals, the major barriers to optimising eye health faced by patients with diabetes were long wait times for an appointment (55%), a lack of knowledge and/or awareness (50%), and patients feeling that eye exams were not important (45%) (see Appendix PT 2.18).

Ophthalmologists reported similar barriers to optimising eye health such as long wait times for an appointment (62%), a lack of knowledge and/or awareness (62%) and patients feel eye exams are not important (54%) (see Table 13 and PT 2.18).

## Table 13: Major barriers to optimising eye health

| Response | All Respondents (n=20) | Ophthalmologists (n=13) |
| --- | --- | --- |
| Long wait time for appointment | 11 (55.0%) | 8 (61.5%) |
| Lack of knowledge and/or awareness | 10 (50.0%) | 8 (61.5%) |
| Patients feel eye exams are not important | 9 (45.0%) | 7 (53.8%) |
| Referral process | 8 (40.0%) | 6 (46.2%) |
| Proximity to care | 5 (25.0%) | 5 (38.5%) |
| Long wait time on the day of visit | 5 (25.0%) | 5 (38.5%) |
| Patients fear of treatment/results | 4 (20.0%) | 4 (30.8%) |
| Limited access to diabetes specialists | 6 (30.0%) | 4 (30.8%) |
| Cost of care | 3 (15.0%) | 3 (23.1%) |
| Patients feel eye complications are unlikely | 4 (20.0%) | 3 (23.1%) |
| Patients have competing responsibilities and priorities | 4 (20.0%) | 3 (23.1%) |
| Recommended treatments are not available | 2 (10.0%) | 2 (15.4%) |
| Limited access to eye specialists | 4 (20.0%) | 2 (15.4%) |
| Patients feel they are a burden on family/friends | 1 (5.0%) | 1 (7.7%) |
| Clinic too small or lack necessary equipment/staff | 3 (15.0%) | 1 (7.7%) |
| Other | 1 (5.0%) | 1 (7.7%) |

# Saudi Arabia
# DR Barometer Findings:
## Ophthalmologists

## Screening

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

The ophthalmologists reported that an average of 49% of their patients had DR and 39% had DME (see Appendix PT 4.1 and PT 4.2).

The most common waiting time for a patient for a screening appointment for DED was more than one week but less than one month (27%) with 27% stating more than three months but less than six months (see Appendix PT 4.3).

Fifty-five percent of ophthalmologists reported that there was no wait from time of screening to diagnosis and 18% (n=2) reported a wait time of less than one week (see Appendix PT 4.4).

## Treatment and Challenges

Ninety percent of ophthalmologists administer treatment for DR themselves (see Appendix PT 4.6).

The most common factors influencing the ophthalmologists on how they treat DR or DME are the presence of comorbidities such as hypertension (67%), a patient's ability to adhere to recommendations (67%), and the duration of diabetes (56%) (see Appendix PT 4.7).

The most common outreach venues for screening for DED were health fairs for people with diabetes (44%), health fairs for all (22%), vision centres (22%), and mobile screening centres (11%) (see Appendix PT 4.13).

All ophthalmologists reported that they screen patients for DR based on fundoscopy through dilated pupils, 80% based on optical coherence tomography, 40% based on retinal photo, 40% based on fluorescein angiography, and 30% based on fundoscopy through undilated pupils (see Appendix PT 4.9).

Seventy percent (n=7) reported that the majority of patients present when visual problems have already occurred, while 20% (n=2) said that patients present in time for screening and 10% (n=1) said that presentation was too late for effective treatment (see Appendix PT 4.10).

All ophthalmologists reported that they treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8).

Ninety percent of ophthalmologists had received specific training on treatment and diagnosis of DR and or DME, with 56% stating the training was five or more years ago, 22% said that the training was between one and five years ago, and 22% said it was within the past year (see Appendix PT 4.11).

Sixty percent would be interested in online education and certification on DME, angiogenesis and anti-VEGF therapies (see Appendix PT 4.12).

Ophthalmologists reported that the greatest challenges for improving patient outcomes in DED were late diagnosis (56%, n=5), limited access to patient education on DR and DME (56%, n=5), and ineffective screening services (56%, n=5) (see Table 14 and Appendix PT 4.14).

## Table 14: Challenges for improving outcomes in DED

| Question | Response | Ophthalmologist (n=9) |
|---|---|---|
| What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease? | Late diagnosis | 5 (55.6%) |
| | Limited access to patient education on diabetic retinopathy and diabetic macular edema | 5 (55.6%) |
| | Ineffective screening services | 5 (55.6%) |
| | Multi-disciplinary team integration is poor | 4 (44.4%) |
| | Referral pathways | 3 (33.3%) |
| | No universal guidelines on referral/ screening | 3 (33.3%) |
| | Reimbursement/restrictions on approved therapy | 2 (22.2%) |
| | No universal guidelines on how to treat | 2 (22.2%) |
| | No universal guideline on when to treat | 2 (22.2%) |
| | Current available therapies not effective | 1 (11.1%) |
| | Government/insurance not able to cover patient costs | 1 (11.1%) |

# Saudi Arabia
# DR Barometer Summary

In Saudi Arabia, 44 adults with diabetes and 24 health care professionals have provided insight about their experiences of living with, managing, and treating diabetes, DED and DME. The results provide an understanding of the levels of awareness, as well as the nature of the management and services available in Saudi Arabia.

The results of the DR Barometer Study, Saudi Arabia 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.

Saudi Arabia has 28% of its population under the age of 15 years while only 3% is over the age of 65 years. By 2050, the population is expected to increase by 43%, and with that population ageing will be realised in a significant way. Those aged 15 years and younger will only make up ~19% of the country population while those aged 65 years or older will make up ~15.5% of Saudi Arabia's population.

This means that in just over 30 years the population aged 65 years or older will sextuple (increase by ~636%) and reach an all-time high of approximately 7 million.

Alongside the demographic changes the prevalence of people with diabetes is climbing rapidly. Today Saudi Arabia has the fourth highest number of people living with diabetes in the Middle East and North Africa region at ~3.5 million (2,682.2-3,897.5‡), which accounts for some 10% of people living with diabetes in this region.

The DR Barometer findings in most other countries indicate that a younger population was more likely to be associated with type 1 diabetes, which was the opposite for those with type 2 diabetes, which tended to be an older population. In Saudi Arabia, the proportions were less distinct. Forty-eight percent of those in the youngest age group (18-39 years) had type 1 diabetes (32% type 2). In the 40 – 59 age group 9.1% had type 1 (55% type 2) and 50% of 60-79 year-olds had type 1 diabetes (50% type 2). Almost a quarter (23%) of those surveyed were either unsure or did not know their type of diabetes. This is an important finding with respect to population ageing and anticipated increased incidence of diabetes in Saudi Arabia in decades to come.

People were most often informed about their condition by health professionals such as the doctor, nurse. Family and friends were valuable sources of information as was TV, radio, newspapers, or magazines. A trend globally, which was reflected in the Saudi Arabia study, was the significant use of the internet by over half (56%) of the respondents. To a much lesser degree diabetes and other health organisations were called upon as resources (19%).

About one-quarter (23%) of respondents were enrolled in diabetes management programmes and most (89%) noted there was education on the importance of screening for eye complications.

Many of those surveyed struggled with the management of their diabetic condition with some issues that were within their personal control such as eating the right foods and competing responsibilities. In addition the high cost of care, travelling to appointments and long wait times for appointments were challenges.

There was a relatively low awareness of the complications associated with diabetes. Vision loss and cardiovascular disease were the most concerning but the frequency was relatively low (23%) compared with other countries, followed by amputation (18%), neuropathy (10%) and kidney disease (10%). Only 39% of those surveyed had no complications, 26% had neuropathy, amputation (18%), foot ulcers (13%), kidney disease (7.7%) and vision loss (5.1%). While the number of respondents was small, all those with DED and DME had additional complications.

Knowing that diabetic-related vision loss is preventable addressing barriers to eye screening is an important policy issue. Just over half (55%) of respondents had received an eye exam, and many reported significant barriers including the high costs of exams, long wait times for an appointment, and for 39% eye exams were not available near their home.

Evidence shows that the relationship between the patient and the health care professional is critical to ensure realistic and optimal patient outcomes. It was therefore surprising that over a quarter (28%) of patients surveyed had either never had a conversation about eye complications or it took place only when symptoms were present. Equally concerning is the myths and perceptions around vision changes with 48% of patients reporting that vision problems were a normal part of ageing and 23% not making any special effort to prevent vision problems.

Three-quarters (77%) of respondents with DED or DME said that their vision was slightly or significantly affected, which in turn impacted their health, lifestyle and life choices and the most difficult being travelling and leisure activities. The impact of DED on a person's wellbeing was evident in the findings with some 75% experiencing mentally unhealthy days compared with 58% of those without DED. Furthermore, 75% of those with DME experienced limitations to their daily activities as a result of poor health compared with 17% of those without DED.

A proactive treatment approach to prevent further vision loss was preferred rather than reactive treatment once further vision loss had occurred. However, for some (17%) respondents access to healthcare was affected by where they actually lived. Health (37%), family (16%), and money (13%) were the top three 'worries' on the minds of the respondents surveyed

An unexpected finding was that 45% of patients had trouble paying for food at some time in the last year and 68% felt that their access to health care was also affected, with 26% by income.

Part of a proactive approach relates to seeing health professionals in a timely manner; however, for respondents in Saudi Arabia this was not always possible. The average wait time to see an ophthalmologist was more than three months but less than six months in 36% of practices.

Patient education is very much at the heart of a proactive approach so it was unexpected to find that 40% of all providers said that that the written information about diabetes and eye complications was either insufficient (15%) or not available (25%). Furthermore, only 60% of providers including 54% of ophthalmologists had written protocols for the management of diabetes-related vision issues and in some practices (30% all providers, 39% ophthalmologists) such protocols did not exist.

There were varied times reported for the initial eye exam depending on the type of diabetes. For those with type 1 diabetes, 53% of providers said it should occur at predetermined number of years (average 5.5 years). For those with type 2 diabetes, 75% reported it should be at time of diagnosis. There was general agreement by most that follow-up eye examinations should be conducted every year.

Late diagnosis, complex or inadequate referral pathways, limited access to patient education on DR and DME, ineffective screening services and insurance restrictions were viewed by ophthalmologists in Saudi Arabia as some of the greatest challenges for improving patient outcomes in DED.

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

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

# 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*. Retrieved from: http://www.diabetesatlas.org/

# Appendices

# The Diabetic Retinopathy Barometer Survey: Appendices for Saudi Arabia

## APPENDIX 1 : National Results

**Table 1.1**

| Survey Information | Number of Respondents (%) |
|---|---|
| All valid respondents [1] | 49 (100.0%) |
| Respondents aged 18 or over | 49 (100.0%) |
| Respondents with diabetes | 44 (89.8%) |

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

**Table 1.2**

| Survey Information | Number of Respondents (%) |
|---|---|
| All valid respondents | 49 (100.0%) |
| Included in Diabetic Analysis Set | 44 (89.8%) |
| Excluded from Diabetic Analysis Set | 5 (10.2%) |
| Reasons for exclusion from diabetic analysis set | . |
| Not diagnosed with diabetes | 4 |
| Missing information on diabetes diagnosis | 1 |

**Table 1.3**

| Survey Information | Number of Respondents (%) |
|---|---|
| Diabetic Analysis Set | 44 (100.0%) |
| World Bank Income Group: High Income | 44 (100.0%) |
| Persons with diabetic eye disease (DED) | 6 (13.6%) |
| Persons with diabetic macular edema (DME) | 4 (9.1%) |
| Persons with Type I diabetes | 17 (38.6%) |
| Persons with Type II diabetes | 17 (38.6%) |
| Persons not seeing health care professional for diabetes | 8 (18.2%) |
| Persons seeing health care professional for diabetes | 36 (81.8%) |
| Persons with eye disease & not received treatment | 4 (9.1%) |
| Persons with eye disease & received treatment | 5 (11.4%) |

**Table 2.1**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| With which type of diabetes have you been diagnosed? | Type I | 17 (38.6) |
| | Type II | 17 (38.6) |
| | Don't know/Not sure | 10 (22.7) |
| | Total Valid Response | 44 (100.0) |

**Table 2.2**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| When was your diabetes diagnosed? | Within the last year | 15 (34.1) |
| | 1 - 5 years ago | 16 (36.4) |
| | 6 - 10 years ago | 6 (13.6) |
| | 11 - 15 years ago | 4 (9.1) |
| | 16 - 20 years ago | 1 (2.3) |
| | 21 years ago or longer | 1 (2.3) |
| | Don't know/Not sure | 1 (2.3) |
| | Total Valid Response | 44 (100.0) |

**Table 2.3.1**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Do you see a health care professional for your diabetes? | Yes | 36 (81.8) |
| | No | 8 (18.2) |
| | Total Valid Response | 44 (100.0) |
| What kind of health care professional? | General/Family Doctor | 16 (44.4) |
| | Nurse | 1 (2.8) |
| | Diabetes Specialist | 18 (50.0) |
| | Other | 1 (2.8) |
| | Total Valid Response | 36 (100.0) |
| | Total missing | 8 |

**Table 2.3.2**

| Type of health care professional | Times per year seen for diabetes | Value |
|---|---|---|
| General/Family Doctor | Total valid numeric response (n) | 9 |
| | Mean | 6.1 |
| | SD | 3.7 |
| | Median | 6.0 |
| | Min | 1 |
| | Max | 12 |
| | Don't know/Not sure | 6 |
| | Total missing | 1 |
| Nurse | Don't know/Not sure | 1 |
| Diabetes Specialist | Total valid numeric response (n) | 12 |
| | Mean | 6.9 |
| | SD | 4.1 |
| | Median | 6.0 |
| | Min | 1 |
| | Max | 12 |
| | Don't know/Not sure | 4 |
| | Total missing | 2 |
| Other | Don't know/Not sure | 1 |

**Table 2.4**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| How have you received information about diabetes? | Doctor or nurse | 32 (74.4%) |
| | Health educator | 8 (18.6%) |
| | Nutritionist or dietitian | 16 (37.2%) |
| | Diabetes organization or other health organization | 8 (18.6%) |
| | Family/Friends/Neighbors | 18 (41.9%) |
| | TV/Radio/Newspaper/Magazines | 17 (39.5%) |
| | Internet | 24 (55.8%) |
| | Social media (e.g. Facebook, Twitter, blogs) | 12 (27.9%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Pharmacist | 15 (34.9%) |
| | None of the above | 1 (2.3%) |
| | Total Valid Response | 43 (100.0%) |
| | Total missing | 1 |

**Table 2.5**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| How do you manage your diabetes? | Diet | 29 (67.4%) |
| | Oral medicine | 20 (46.5%) |
| | Exercise | 15 (34.9%) |
| | Insulin | 13 (30.2%) |
| | Natural/Herbal medicine | 4 (9.3%) |
| | None of the above | 1 (2.3%) |
| | Total Valid Response | 43 (100.0%) |
| | Total missing | 1 |

**Table 2.6**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Are you currently enrolled in a diabetes patient management support programme? | Yes | 10 (23.3) |
| | No | 33 (76.7) |
| | Total Valid Response | 43 (100.0) |
| | Total missing | 1 |
| Who sponsors the programme? | Hospital support program | 7 (70.0) |
| | Clinic support program | 2 (20.0) |
| | Pharmaceutical support program | 1 (10.0) |
| | Total Valid Response | 10 (100.0) |
| | Total missing | 34 |
| Does the programme include education on the importance of screening for diabetic eye complications? | Yes | 8 (88.9) |
| | No | 1 (11.1) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Total Valid Response | 9 (100.0) |
| | Total missing | 35 |

**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 | 42 (97.7%) |
| | Less than 6 months | 30 (69.8%) |
| | 6 - 12 months | 7 (16.3%) |
| | Greater than 12 months | 3 (7.0%) |
| | Total valid response | 40 (93.0%) |
| | Total missing | 4 |
| | Don't know/Not sure | 1 (2.3%) |
| | Total valid response | 43 (100.0%) |
| | Total missing | 1 |
| Urine check | Yes | 36 (90.0%) |
| | Less than 6 months | 22 (55.0%) |
| | 6 - 12 months | 7 (17.5%) |
| | Greater than 12 months | 6 (15.0%) |
| | Total valid response | 35 (87.5%) |
| | Total missing | 9 |
| | No | 4 (10.0%) |
| | Total valid response | 40 (100.0%) |
| | Total missing | 4 |
| Weight check | Yes | 35 (83.3%) |

| Test | Response | Number of Respondents (%) |
|---|---|---|
| Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago | | |
| | Less than 6 months | 23 (54.8%) |
| | 6 - 12 months | 9 (21.4%) |
| | Greater than 12 months | 2 (4.8%) |
| | Total valid response | 34 (81.0%) |
| | Total missing | 10 |
| | No | 6 (14.3%) |
| | Don't know/Not sure | 1 (2.4%) |
| | Total valid response | 42 (100.0%) |
| | Total missing | 2 |
| Blood pressure check | Yes | 36 (90.0%) |
| | Less than 6 months | 28 (70.0%) |
| | 6 - 12 months | 4 (10.0%) |
| | Greater than 12 months | 4 (10.0%) |
| | Total valid response | 36 (90.0%) |
| | Total missing | 8 |
| | No | 4 (10.0%) |
| | Total valid response | 40 (100.0%) |
| | Total missing | 4 |
| Foot check | Yes | 16 (41.0%) |
| | Less than 6 months | 5 (12.8%) |
| | 6 - 12 months | 6 (15.4%) |
| | Greater than 12 months | 4 (10.3%) |
| | Total valid response | 15 (38.5%) |

| Test | Response | Number of Respondents (%) |
|---|---|---|
| Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago | | |
| | Total missing | 29 |
| | No | 19 (48.7%) |
| | Don't know/Not sure | 4 (10.3%) |
| | Total valid response | 39 (100.0%) |
| | Total missing | 5 |
| Eye check | Yes | 30 (75.0%) |
| | Less than 6 months | 16 (40.0%) |
| | 6 - 12 months | 8 (20.0%) |
| | Greater than 12 months | 5 (12.5%) |
| | Total valid response | 29 (72.5%) |
| | Total missing | 15 |
| | No | 8 (20.0%) |
| | Don't know/Not sure | 2 (5.0%) |
| | Total valid response | 40 (100.0%) |
| | Total missing | 4 |

**Table 2.8**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| How well do you think your diabetes is controlled? | Very well | 14 (35.0%) |
| | Well | 19 (47.5%) |
| | Not very well | 6 (15.0%) |
| | Not well at all | 1 (2.5%) |
| | Total Valid Response | 40 (100.0%) |
| | Total missing | 4 |

**Table 2.9**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| What are the main challenges you face in controlling your diabetes? | High cost of care | 15 (37.5%) |
| | No insurance | 11 (27.5%) |
| | Travel to my regular doctor or specialist is difficult | 14 (35.0%) |
| | Long wait time for an appointment to see my doctor or specialist | 14 (35.0%) |
| | Health services needed are not available | 3 (7.5%) |
| | Don't know enough about diabetes | 7 (17.5%) |
| | Too hard to eat the right things | 25 (62.5%) |
| | Too many other things to do | 15 (37.5%) |
| | Stigma or discrimination because of diabetes | 3 (7.5%) |
| | Don't want to think about having diabetes | 8 (20.0%) |
| | Other | 3 (7.5%) |
| | Total Valid Response | 40 (100.0%) |
| | Total missing | 4 |

**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 | 24 (60.0%) |
| | Support groups | 20 (50.0%) |
| | Support from family or friends | 18 (45.0%) |
| | Health education and information | 20 (50.0%) |
| | Mobile services (services that travel to or near your home) | 7 (17.5%) |
| | Coordination of healthcare and services by a professional | 14 (35.0%) |
| | Emergency helpline | 5 (12.5%) |
| | Other | 3 (7.5%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | None | 3 (7.5%) |
| | Total Valid Response | 40 (100.0%) |
| | Total missing | 4 |

**Table 2.11**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| What complications (or problems), to your knowledge, arise from diabetes? | Amputation | 22 (55.0%) |
| | Foot ulcers | 17 (42.5%) |
| | Increased risk of broken bones or fractures | 10 (25.0%) |
| | Loss of feeling in hands or toes (neuropathy) | 20 (50.0%) |
| | Vision loss | 21 (52.5%) |
| | Irritable bowel disease | 9 (22.5%) |
| | Kidney disease | 18 (45.0%) |
| | Cardiovascular disease/Stroke | 15 (37.5%) |
| | Other | 2 (5.0%) |
| | Don't know/Not sure | 3 (7.5%) |
| | None | 1 (2.5%) |
| | Total Valid Response | 40 (100.0%) |
| | Total missing | 4 |

**Table 2.12**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Which complication of diabetes are you most concerned about? | Amputation | 7 (17.5) |
| | Foot ulcers | 1 (2.5) |
| | Increased risk of broken bones or fractures | 1 (2.5) |
| | Loss of feeling in hands or toes (neuropathy) | 4 (10.0) |
| | Vision loss | 9 (22.5) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Kidney disease | 4 (10.0) |
| | Cardiovascular disease/Stroke | 9 (22.5) |
| | Don't know/Not sure | 2 (5.0) |
| | None | 3 (7.5) |
| | Total Valid Response | 40 (100.0) |
| | Total missing | 4 |

**Table 2.13**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Which of the following complications of diabetes do you have? | Amputation | 7 (17.9%) |
| | Foot ulcers | 5 (12.8%) |
| | Broken bones or fractures | 3 (7.7%) |
| | Loss of feeling in hands or toes (neuropathy) | 10 (25.6%) |
| | Vision loss | 2 (5.1%) |
| | Irritable bowel disease | 5 (12.8%) |
| | Kidney disease | 3 (7.7%) |
| | Other | 2 (5.1%) |
| | Don't know/Not sure | 2 (5.1%) |
| | None | 15 (38.5%) |
| | Total Valid Response | 39 (100.0%) |
| | Total missing | 5 |

**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 | 9 (23.1%) |
| | Multiple times per year | 12 (30.8%) |
| | Once per year | 5 (12.8%) |
| | Only when symptoms arise | 7 (17.9%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Never | 4 (10.3%) |
| | Don't know/Not sure | 2 (5.1%) |
| | Total Valid Response | 39 (100.0%) |
| | Total missing | 5 |

**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 (47.5%) |
| | I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists) | 24 (60.0%) |
| | I do not make any special effort to prevent vision problems | 9 (22.5%) |
| | Total Valid Response | 40 (100.0%) |
| | Total missing | 4 |

**Table 2.16**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| What type of health insurance do you have? | Public | 7 (17.5) |
| | Public - Private | 6 (15.0) |
| | Private | 19 (47.5) |
| | None | 8 (20.0) |
| | Total Valid Response | 40 (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 | 6 (15.4) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Most often, how do you pay for the following types of medical care and services? | | |
| | Insurance pays total cost | 12 (30.8) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 13 (33.3) |
| | Out-of-pocket only (pay cash for all care) | 7 (17.9) |
| | Do not use service | 1 (2.6) |
| | Total Valid Response | 39 (100.0) |
| | Total missing | 5 |
| Specialist medical visits (e.g. eye doctor, gynecologist, urologist) | Care is free | 3 (7.9) |
| | Insurance pays total cost | 9 (23.7) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 10 (26.3) |
| | Out-of-pocket only (pay cash for all care) | 14 (36.8) |
| | Do not use service | 2 (5.3) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |
| Medicines | Care is free | 8 (21.6) |
| | Insurance pays total cost | 6 (16.2) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 11 (29.7) |
| | Out-of-pocket only (pay cash for all care) | 11 (29.7) |
| | Don't know/Not Sure | 1 (2.7) |
| | Total Valid Response | 37 (100.0) |
| | Total missing | 7 |
| Medical supplies (e.g. blood glucose meter/strips) | Care is free | 5 (13.2) |
| | Insurance pays total cost | 9 (23.7) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 10 (26.3) |
| | Out-of-pocket only (pay cash for all care) | 13 (34.2) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Most often, how do you pay for the following types of medical care and services? | | |
| | Do not use service | 1 (2.6) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |
| Procedures | Care is free | 6 (15.8) |
| | Insurance pays total cost | 9 (23.7) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 11 (28.9) |
| | Out-of-pocket only (pay cash for all care) | 8 (21.1) |
| | Do not use service | 3 (7.9) |
| | Don't know/Not Sure | 1 (2.6) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |
| Tests/screenings | Care is free | 4 (10.5) |
| | Insurance pays total cost | 12 (31.6) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 8 (21.1) |
| | Out-of-pocket only (pay cash for all care) | 12 (31.6) |
| | Do not use service | 1 (2.6) |
| | Don't know/Not Sure | 1 (2.6) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |
| Health education | Care is free | 11 (29.7) |
| | Insurance pays total cost | 8 (21.6) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 2 (5.4) |
| | Out-of-pocket only (pay cash for all care) | 10 (27.0) |
| | Do not use service | 3 (8.1) |
| | Don't know/Not Sure | 3 (8.1) |
| | Total Valid Response | 37 (100.0) |
| | Total missing | 7 |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Most often, how do you pay for the following types of medical care and services? | | |
| Counseling | Care is free | 11 (29.7) |
| | Insurance pays total cost | 5 (13.5) |
| | Insurance and out-of-pocket/cash (e.g. co-pays) | 6 (16.2) |
| | Out-of-pocket only (pay cash for all care) | 11 (29.7) |
| | Do not use service | 3 (8.1) |
| | Don't know/Not Sure | 1 (2.7) |
| | Total Valid Response | 37 (100.0) |
| | Total missing | 7 |

**Table 3.1**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)? | Yes | 10 (25.0%) |
| | No | 30 (75.0%) |
| | Total valid response | 40 (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 | 22 (55.0%) |
| | No | 18 (45.0%) |
| | Total valid response | 40 (100.0%) |
| | Total missing | 4 |
| How long ago was your last eye exam? | Within the last year | 16 (76.2%) |
| | More than 1 year ago but less than 2 years | 4 (19.0%) |
| | More than 2 years ago but less than 3 years | 1 (4.8%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Total valid response | 21 (100.0%) |
| | Total missing | 23 |
| Who did the last exam? | General/Family practitioner | 7 (35.0%) |
| | Eye doctor/Eye clinic | 13 (65.0%) |
| | Total valid response | 20 (100.0%) |
| | Total missing | 24 |

**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 | 18 (46.2%) |
| | No | 16 (41.0%) |
| | Don't know/Not sure | 5 (12.8%) |
| | Total valid response | 39 (100.0%) |
| | Total missing | 5 |

**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 | 19 (50.0%) |
| | Every two years | 7 (18.4%) |
| | Less often than every two years | 1 (2.6%) |
| | Only when symptoms occur | 4 (10.5%) |
| | Never | 4 (10.5%) |
| | Don't know/Not sure | 3 (7.9%) |
| | Total valid response | 38 (100.0%) |
| | Total missing | 6 |

**Table 3.5**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| For you, what are the biggest barriers to eye exams? | They are expensive | 20 (51.3%) |
| | Eye exams are not available near my home | 15 (38.5%) |
| | Long wait time for appointment | 17 (43.6%) |
| | Long wait time on the day of the visit | 14 (35.9%) |
| | Referral process is complicated or takes too long | 4 (10.3%) |
| | Recommended treatments for eye problems are not available | 3 (7.7%) |
| | Don't know much about my condition | 9 (23.1%) |
| | Fear of treatment/results | 4 (10.3%) |
| | Burden on my family/friends | 4 (10.3%) |
| | Limited access to diabetes specialists | 2 (5.1%) |
| | I'm not likely to have eye complications | 5 (12.8%) |
| | Eye exams are not important | 1 (2.6%) |
| | Too many other things to do or worry about | 4 (10.3%) |
| | Clinics are too small or lack necessary equipment/staff | 4 (10.3%) |
| | Other | 1 (2.6%) |
| | Total valid response | 39 (100.0%) |
| | Total missing | 5 |

**Table 3.6**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Have you been diagnosed with diabetic eye disease? | Yes | 9 (23.1%) |
| | No | 30 (76.9%) |
| | Total valid response | 39 (100.0%) |
| | Total missing | 5 |
| Has your diabetic eye disease affected your vision? | Yes, slightly | 4 (44.4%) |
| | Yes, significantly | 3 (33.3%) |
| | No | 2 (22.2%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
|  | Total valid response | 9 (100.0%) |
|  | Total missing | 35 |
| Have vision issues caused you to have difficulty with any of the following? | Traveling | 3 (42.9%) |
|  | Household responsibilities, such as cooking or cleaning | 1 (14.3%) |
|  | Social interactions with family/friends | 1 (14.3%) |
|  | Leisure activities/exercise | 2 (28.6%) |
|  | Work or keeping a job | 1 (14.3%) |
|  | None | 1 (14.3%) |
|  | Driving (a car/vehicle) | 1 (14.3%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |

**Table 3.7**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Have you had any treatment for diabetic eye disease? | Yes | 5 (55.6%) |
|  | No | 4 (44.4%) |
|  | Total valid response | 9 (100.0%) |
|  | Total missing | 35 |
| What treatment did you receive? | Laser | 3 (60.0%) |
|  | Injection in the eye (Anti-VEGF) | 2 (40.0%) |
|  | Surgery | 1 (20.0%) |
|  | Total valid response | 5 (100.0%) |
|  | Total missing | 39 |
| Did you complete the treatment? | Yes | 4 (80.0%) |
|  | Still receiving treatment | 1 (20.0%) |
|  | Total valid response | 5 (100.0%) |
|  | Total missing | 39 |
| Do you feel that the treatment worked? | Yes, and vision improved | 3 (60.0%) |
|  | Yes, but vision stayed the | 2 (40.0%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | same | |
| | Total valid response | 5 (100.0%) |
| | Total missing | 39 |
| What is/are the reason(s) that you did not complete the treatment? | Total missing | 44 |
| What are the reason(s) that you have not had treatment for diabetic eye disease? | My doctor did not recommend any treatment | 2 (66.7%) |
| | Still waiting for treatment | 2 (66.7%) |
| | Too expensive | 1 (33.3%) |
| | I'm too busy | 1 (33.3%) |
| | Total valid response | 3 (100.0%) |
| | Total missing | 41 |

Table 3.8

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Have you been diagnosed with diabetic macular edema? | Yes | 4 (10.5%) |
| | No | 30 (78.9%) |
| | Don't know/Not sure | 4 (10.5%) |
| | Total valid response | 38 (100.0%) |
| | Total missing | 6 |
| If Yes, which of the following would you prefer | Treatment to prevent further vision loss | 4 (100.0%) |
| | Total valid response | 4 (100.0%) |
| | Total missing | 40 |

Table 3.9

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Have you received information about diabetic retinopathy or diabetic macular edema from any of the following sources? | Doctor/Nurse | 16 (42.1%) |
| | Health educator | 7 (18.4%) |
| | Diabetes organization or other health | 5 (13.2%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | organization | |
| | Family/Friends/Neighbors | 5 (13.2%) |
| | TV/Radio/Newspaper/Magazines | 6 (15.8%) |
| | Internet | 7 (18.4%) |
| | None of the above | 16 (42.1%) |
| | Total valid response | 38 (100.0%) |
| | Total missing | 6 |

**Table 4.1**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| What is your gender? | Female | 8 (21.6) |
| | Male | 29 (78.4) |
| | Total Valid Response | 37 (100.0) |
| | Total missing | 7 |
| Please indicate your age | 18 - 29 | 16 (36.4) |
| | 30 - 39 | 15 (34.1) |
| | 40 - 49 | 8 (18.2) |
| | 50 - 59 | 3 (6.8) |
| | 60 - 69 | 2 (4.5) |
| | Total Valid Response | 44 (100.0) |

**Table 4.2**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Where do you live? | Urban setting | 36 (94.7) |
| | Non-urban setting | 2 (5.3) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |

**Table 4.3**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| What is the highest level of education you completed? | Did not complete primary school | 1 (2.6) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Primary school | 2 (5.3) |
| | Secondary school | 8 (21.1) |
| | College/University | 19 (50.0) |
| | Graduate or post-graduate | 8 (21.1) |
| | Total valid response | 38 (100.0) |
| | Total missing | 6 |

**Table 4.4**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Are you currently working? | Working for pay | 25 (65.8) |
| | Working without pay at home (e.g. housework, farming) | 6 (15.8) |
| | Student | 5 (13.2) |
| | Not working | 2 (5.3) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |

**Table 4.5**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Do you receive assistance from the government? | Income assistance | 6 (15.8%) |
| | Medical assistance | 4 (10.5%) |
| | Food assistance | 4 (10.5%) |
| | Housing assistance | 1 (2.6%) |
| | Pension assistance | 1 (2.6%) |
| | None of the above | 28 (73.7%) |
| | Total valid response | 38 (100.0%) |
| | Total missing | 6 |

**Table 4.6**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Did you have trouble paying for food at anytime during the past year? | Yes | 17 (44.7) |
| | No | 21 (55.3) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |

**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 | 8 (21.1) |
| | Education | 5 (13.2) |
| | Ethnicity | 5 (13.2) |
| | Gender | 6 (15.8) |
| | Income | 10 (26.3) |
| | Language you speak | 9 (23.7) |
| | Place of birth | 5 (13.2) |
| | Place where you live | 9 (23.7) |
| | Race | 3 (7.9) |
| | Religion | 4 (10.5) |
| | Sexual orientation | 2 (5.3) |
| | Tribal affiliation | 2 (5.3) |
| | None of the above | 12 (31.6) |
| | Total valid response | 0 (0.0) |
| | Total missing | 1 |

**Table 4.8**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Which of the following do you worry about | Food | 3 (7.9) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| most? | | |
| | Housing | 8 (21.1) |
| | Money | 5 (13.2) |
| | Health | 14 (36.8) |
| | Family | 6 (15.8) |
| | None of the above | 2 (5.3) |
| | Total Valid Response | 38 (100.0) |
| | Total missing | 6 |

**Table 5.1**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| In general, would you say your health is: | Excellent | 2 (5.6%) |
| | Very good | 18 (50.0%) |
| | Good | 10 (27.8%) |
| | Total good health | 30 (83.3%) |
| | Fair | 5 (13.9%) |
| | Poor | 1 (2.8%) |
| | Fair or poor health | 6 (16.7%) |
| | Total valid response | 36 (100.0%) |
| | Total missing | 8 |

**Table 5.2**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| How many days during last 30 days was your physical health not good | Any unhealthy days | 16 (57.1%) |
| | 1-5 unhealthy days | 11 (39.3%) |
| | 6-10 unhealthy days | 2 (7.1%) |
| | 11-20 unhealthy days | 2 (7.1%) |
| | 21-30 unhealthy days | 1 (3.6%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | No unhealthy days | 12 (42.9%) |
| | Total valid response | 28 (100.0%) |
| | Total missing | 16 |

**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 | 19 (59.4%) |
| | 1-5 unhealthy days | 9 (28.1%) |
| | 6-10 unhealthy days | 6 (18.8%) |
| | 11-20 unhealthy days | 2 (6.3%) |
| | 21-30 unhealthy days | 2 (6.3%) |
| | No unhealthy days | 13 (40.6%) |
| | Total valid response | 32 (100.0%) |
| | Total missing | 12 |

**Table 5.3.2**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| Unhealthy days (physically or mentally unhealthy, max 30) | Any unhealthy days | 23 (76.7%) |
| | 1-5 unhealthy days | 10 (33.3%) |
| | 6-10 unhealthy days | 3 (10.0%) |
| | 11-20 unhealthy days | 7 (23.3%) |
| | 21-30 unhealthy days | 3 (10.0%) |
| | No unhealthy days | 7 (23.3%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| | Total valid response | 30 (100.0%) |

**Table 5.4**

| Question | Response | Number of Respondents (%) |
|---|---|---|
| How many days during last 30 days did poor health limit your usual activities | Any unhealthy days | 15 (55.6%) |
| | 1-5 unhealthy days | 8 (29.6%) |
| | 6-10 unhealthy days | 6 (22.2%) |
| | 11-20 unhealthy days | 1 (3.7%) |
| | No unhealthy days | 12 (44.4%) |
| | Total valid response | 27 (100.0%) |
| | Total missing | 17 |

**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 | 8 (21.6%) |
| | No | 29 (78.4%) |
| | Total valid response | 37 (100.0%) |
| | Total missing | 7 |
| Which impairment or health problem, if any, limits your activities? | | |
| a) Arthritis/rheumatism | Yes | 3 (37.5%) |
| | No | 5 (62.5%) |
| | Total valid response | 8 (100.0%) |
| | Total missing | 36 |

| Question | Response | Number of Respondents (%) |
|---|---|---|
| b) Back or neck problem | Yes | 5 (62.5%) |
| | No | 3 (37.5%) |
| | Total valid response | 8 (100.0%) |
| | Total missing | 36 |
| c) Fractures, bone/joint injury | Yes | 2 (28.6%) |
| | No | 5 (71.4%) |
| | Total valid response | 7 (100.0%) |
| | Total missing | 37 |
| d) Walking problem | Yes | 3 (37.5%) |
| | No | 5 (62.5%) |
| | Total valid response | 8 (100.0%) |
| | Total missing | 36 |
| e) Lung/breathing problem | No | 6 (85.7%) |
| | Don't know/Not sure | 1 (14.3%) |
| | Total valid response | 7 (100.0%) |
| | Total missing | 37 |
| f) Hearing problem | Yes | 1 (14.3%) |
| | No | 5 (71.4%) |
| | Don't know/Not sure | 1 (14.3%) |
| | Total valid response | 7 (100.0%) |
| | Total missing | 37 |
| g) Eye/vision problem | Yes | 1 (14.3%) |
| | No | 5 (71.4%) |
| | Don't know/Not sure | 1 (14.3%) |
| | Total valid response | 7 (100.0%) |
| | Total missing | 37 |
| h) Heart problem | Yes | 1 (14.3%) |

| Question | Response | Number of Respondents (%) |
|---|---|---|
|  | No | 6 (85.7%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |
| i) Stroke problem | No | 6 (85.7%) |
|  | Don't know/Not sure | 1 (14.3%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |
| j) Hypertension/high blood pressure | Yes | 3 (42.9%) |
|  | No | 3 (42.9%) |
|  | Don't know/Not sure | 1 (14.3%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |
| k) Diabetes | Yes | 7 (87.5%) |
|  | No | 1 (12.5%) |
|  | Total valid response | 8 (100.0%) |
|  | Total missing | 36 |
| l) Cancer | Yes | 1 (14.3%) |
|  | No | 6 (85.7%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |
| m) Mental or emotional health | Yes | 4 (57.1%) |
|  | No | 2 (28.6%) |
|  | Don't know/Not sure | 1 (14.3%) |
|  | Total valid response | 7 (100.0%) |
|  | Total missing | 37 |

**PT 1.2**

| Analysis Sets | Number of Respondents (%) |
|---|---|
| All valid respondents | 24 (100.0%) |
| Included in Provider Analysis Set (PAS) | 24 (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 | 24 |
| Included in the Eye Care Professional Set (Eye Specialist) | 15 (62.5%) |
| Excluded in the Eye Care Professional Set (Eye Specialist) | 9 (37.5%) |
| Reasons for exclusion from Eye Care Professional Set: | |
| Missing required speciality | 9 |
| No valid (non-missing) response for the supplemental eye questionnaire | 0 |

**PT 1.3**

| Subgroups | Number of Respondents (%) |
|---|---|
| Provider Analysis Set | 24 (100.0%) |
| Primary Care Provider | 3 (12.5%) |
| Diabetes Specialist Provider | 3 (12.5%) |
| Eye Care Professional | 15 (62.5%) |
| Ophthalmologist | 15 (62.5%) |

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 | 3 (100.0%) | 2 (66.7%) | 1 (6.7%) | 6 (25.0%) |
| | Diabetes specialist | 0 (0.0%) | 3 (100.0%) | 1 (6.7%) | 4 (16.7%) |
| | General ophthalmologist | 0 (0.0%) | 0 (0.0%) | 4 (26.7%) | 4 (16.7%) |
| | Optometrist | 0 (0.0%) | 0 (0.0%) | 1 (6.7%) | 1 (4.2%) |

| Item | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|------|----------|----------------------|------------------------------|-----------------|-----|
| | Retinal specialist | 0 (0.0%) | 0 (0.0%) | 12 (80.0%) | 12 (50.0%) |
| | Nurse | 0 (0.0%) | 0 (0.0%) | 1 (6.7%) | 1 (4.2%) |
| | Health educator | 0 (0.0%) | 0 (0.0%) | 1 (6.7%) | 2 (8.3%) |
| | None of the above | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 2 (8.3%) |
| | Total valid response | 3 (100.0%) | 3 (100.0%) | 15 (100.0%) | 24 (100.0%) |
| | Total missing | 0 | 0 | 0 | 0 |

**PT 1.5**

| Item | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|------|----------|----------------------|------------------------------|-----------------|-----|
| How long have you been practicing in this profession? | Total valid response (n) | 3 | 3 | 15 | 24 |
| | Mean | 16.7 | 8.0 | 17.7 | 15.0 |
| | SD | 5.9 | 8.0 | 19.6 | 16.3 |
| | Median | 19.0 | 8.0 | 10.0 | 10.0 |
| | Min. | 10 | 0 | 2 | 0 |
| | Max. | 21 | 16 | 80 | 80 |
| | Total missing | 0 | 0 | 0 | 0 |

**PT 2.1**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|----------|----------|----------------------|------------------------------|-----------------|-----|
| What is your main practice setting? | Diabetes clinic/practice | 0 (0.0%) | 2 (66.7%) | 0 (0.0%) | 3 (13.0%) |
| | Eye clinic/practice | 0 (0.0%) | 0 (0.0%) | 5 (33.3%) | 5 (21.7%) |
| | General medical clinic/practice | 3 (100.0%) | 1 (33.3%) | 0 (0.0%) | 5 (21.7%) |
| | Hospital | 0 (0.0%) | 0 (0.0%) | 10 (66.7%) | 10 (43.5%) |
| | Other | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | Total Valid Response | 3 (100.0%) | 3 (100.0%) | 15 (100.0%) | 23 (100.0%) |
| | Total missing | 0 | 0 | 0 | 1 |

**PT 2.2**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| Where is your main practice located? | Urban setting | 3 (100.0%) | 2 (66.7%) | 14 (100.0%) | 21 (95.5%) |
| | Non-urban setting | 0 (0.0%) | 1 (33.3%) | 0 (0.0%) | 1 (4.5%) |
| | Total Valid Response | 3 (100.0%) | 3 (100.0%) | 14 (100.0%) | 22 (100.0%) |
| | Total missing | 0 | 0 | 1 | 2 |

**PT 2.3**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| In which sector is your main practice? | Government | 2 (66.7%) | 3 (100.0%) | 11 (73.3%) | 18 (78.3%) |
| | Private | 1 (33.3%) | 0 (0.0%) | 3 (20.0%) | 4 (17.4%) |
| | Non profit | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| | Combined/mixed | 0 (0.0%) | 0 (0.0%) | 1 (6.7%) | 1 (4.3%) |
| | Total Valid Response | 3 (100.0%) | 3 (100.0%) | 15 (100.0%) | 23 (100.0%) |
| | Total missing | 0 | 0 | 0 | 1 |

**PT 2.4**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| Is your main practice limited to certain | No | 3 (100.0%) | 2 (66.7%) | 15 (100.0%) | 21 (91.3%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| populations? | | | | | |
| | Yes, limited by age | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.3%) |
| | Yes, limited by gender | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.3%) |
| | Yes, other | 0 (0.0%) | 1 (33.3%) | 0 (0.0%) | 2 (8.7%) |
| | Total valid response | 3 (100.0%) | 3 (100.0%) | 15 (100.0%) | 23 (100.0%) |
| | Total missing | 0 | 0 | 0 | 1 |

**PT 2.5**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| What is the average wait time for an appointment in your main practice? | Less than 1 week | 1 (50.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.8%) |
| | More than 1 week but less than 1 month | 0 (0.0%) | 1 (33.3%) | 4 (28.6%) | 5 (23.8%) |
| | More than 1 month but less than 2 months | 0 (0.0%) | 0 (0.0%) | 1 (7.1%) | 2 (9.5%) |
| | More than 2 months but less than 3 months | 1 (50.0%) | 0 (0.0%) | 1 (7.1%) | 2 (9.5%) |
| | More than 3 months but less than 6 months | 0 (0.0%) | 1 (33.3%) | 5 (35.7%) | 6 (28.6%) |
| | Six or more months | 0 (0.0%) | 0 (0.0%) | 3 (21.4%) | 3 (14.3%) |
| | Do not take appointments | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.8%) |
| | Other | 0 (0.0%) | 1 (33.3%) | 0 (0.0%) | 1 (4.8%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 14 (100.0%) | 21 (100.0%) |
| | Total missing | 1 | 0 | 1 | 3 |

**PT 2.6**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| On average, how many patients do you see per week in your main practice [n patients] | Total valid response (n) | 2 | 3 | 14 | 21 |
| | Mean | 127.5 | 74 | 64.6 | 68.9 |
| | SD | 137.9 | 45 | 32.8 | 49.2 |
| | Median | 127.5 | 100 | 60 | 60 |
| | Min. | 30 | 22 | 10 | 5 |
| | Max. | 225 | 100 | 130 | 225 |
| | Total missing | 1 | 0 | 1 | 3 |
| What percentage of the patients in your main practice have diabetes [% patients] | Total valid response (n) | 2 | 3 | 13 | 20 |
| | Mean | 55 | 15.7 | 67.9 | 57.3 |
| | SD | 7.1 | 12.5 | 22.7 | 30.6 |
| | Median | 55 | 10 | 70 | 65 |
| | Min. | 50 | 7 | 3 | 3 |
| | Max. | 60 | 30 | 90 | 100 |
| | Total missing | 1 | 0 | 2 | 4 |

**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 | 2 (100.0%) | 3 (100.0%) | 12 (85.7%) | 19 (90.5%) |
| | Pay a reduced/subsidized rate | 0 (0.0%) | 0 (0.0%) | 2 (14.3%) | 2 (9.5%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
|  | Pay out-of-pocket (full fees) | 0 (0.0%) | 0 (0.0%) | 2 (14.3%) | 2 (9.5%) |
|  | Pay through insurance | 0 (0.0%) | 0 (0.0%) | 1 (7.1%) | 2 (9.5%) |
|  | Patient pays some, insurance pays some | 0 (0.0%) | 0 (0.0%) | 2 (14.3%) | 2 (9.5%) |
|  | Other | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (4.8%) |
|  | Total valid response | 2 (100.0%) | 3 (100.0%) | 14 (100.0%) | 21 (100.0%) |
|  | Total missing | 1 | 0 | 1 | 3 |

**PT 2.8**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| In addition to your main practice, do you work in another practice setting? | Yes | 1 (50.0%) | 1 (33.3%) | 4 (28.6%) | 6 (28.6%) |
|  | No | 1 (50.0%) | 2 (66.7%) | 10 (71.4%) | 15 (71.4%) |
|  | Total valid response | 2 (100.0%) | 3 (100.0%) | 14 (100.0%) | 21 (100.0%) |
|  | Total missing | 1 |  | 1 | 3 |
| In which other practice setting(s) do you work? | Hospital |  | 1 (100.0%) | 1 (25.0%) | 2 (33.3%) |
|  | General medical clinic/practice | 1 (100.0%) |  | 1 (25.0%) | 2 (33.3%) |
|  | Diabetes clinic/practice |  |  | 1 (25.0%) | 1 (16.7%) |
|  | Eye clinic/practice |  |  | 4 (100.0%) | 4 (66.7%) |
|  | Other |  | 1 (100.0%) | 1 (25.0%) | 2 (33.3%) |
|  | Total valid response | 1 (100.0%) | 1 (100.0%) | 4 (100.0%) | 6 (100.0%) |
|  | Total missing | 2 | 2 | 11 | 18 |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| In which sector(s) is(are) the practice(s)? | Government | 1 (100.0%) | 1 (100.0%) | | 2 (33.3%) |
| | Private | | | 4 (100.0%) | 4 (66.7%) |
| | Total valid response | 1 (100.0%) | 1 (100.0%) | 4 (100.0%) | 6 (100.0%) |
| | Total missing | 2 | 2 | 11 | 18 |
| Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed? | Yes | 1 (100.0%) | | 1 (25.0%) | 2 (33.3%) |
| | No | | 1 (100.0%) | 3 (75.0%) | 4 (66.7%) |
| | Total valid response | 1 (100.0%) | 1 (100.0%) | 4 (100.0%) | 6 (100.0%) |
| | Total missing | 2 | 2 | 11 | 18 |

**PT 2.9**

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| Blood glucose | Yes | | 2 (100.0%) | 3 (100.0%) | 11 (100.0%) | 18 (100.0%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 3 (100.0%) | 10 (90.9%) | 17 (94.4%) |
| | | Mean | 5.0 | 3.0 | 10.4 | 8.2 |
| | | SD | 1.4 | 2.6 | 18.3 | 14.2 |
| | | Median | 5.0 | 4.0 | 4.0 | 4.0 |
| | | Min | 4 | 0 | 0 | 0 |
| | | Max | 6 | 5 | 60 | 60 |
| | | Total missing | 1 | 0 | 5 | 7 |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 11 (100.0%) | 18 (100.0%) |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | Total missing | | 1 | | 4 | 6 |
| HbA1c | Yes | | 2 (100.0%) | 2 (66.7%) | 9 (90.0%) | 15 (88.2%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 2 (66.7%) | 8 (80.0%) | 14 (82.4%) |
| | | Mean | 2.5 | 3.5 | 5.3 | 4.3 |
| | | SD | 0.7 | 0.7 | 6.7 | 5.1 |
| | | Median | 2.5 | 3.5 | 2.5 | 3.0 |
| | | Min | 2 | 3 | 0 | 0 |
| | | Max | 3 | 4 | 20 | 20 |
| | | Total missing | 1 | 1 | 7 | 10 |
| | No | | | 1 (33.3%) | 1 (10.0%) | 2 (11.8%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 10 (100.0%) | 17 (100.0%) |
| | Total missing | | 1 | | 5 | 7 |
| Urine check | Yes | | 2 (100.0%) | 3 (100.0%) | 7 (77.8%) | 14 (87.5%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 3 (100.0%) | 7 (77.8%) | 14 (87.5%) |
| | | Mean | 3.0 | 0.7 | 3.4 | 2.7 |
| | | SD | 1.4 | 0.6 | 3.2 | 2.5 |
| | | Median | 3.0 | 1.0 | 2.0 | 2.0 |
| | | Min | 2 | 0 | 0 | 0 |
| | | Max | 4 | 1 | 10 | 10 |
| | | Total missing | 1 | 0 | 8 | 10 |
| | No | | | | 2 (22.2%) | 2 (12.5%) |
| | Total valid | | 2 (100.0%) | 3 (100.0%) | 9 (100.0%) | 16 (100.0%) |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | response | | | | | |
| | Total missing | | 1 | | 6 | 8 |
| Weight check | Yes | | 2 (100.0%) | 3 (100.0%) | 9 (90.0%) | 16 (94.1%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 3 (100.0%) | 8 (80.0%) | 15 (88.2%) |
| | | Mean | 5.0 | 2.3 | 2.9 | 3.7 |
| | | SD | 1.4 | 2.1 | 1.9 | 2.9 |
| | | Median | 5.0 | 3.0 | 3.5 | 4.0 |
| | | Min | 4 | 0 | 0 | 0 |
| | | Max | 6 | 4 | 5 | 12 |
| | | Total missing | 1 | 0 | 7 | 9 |
| | No | | | | 1 (10.0%) | 1 (5.9%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 10 (100.0%) | 17 (100.0%) |
| | Total missing | | 1 | | 5 | 7 |
| Blood pressure check | Yes | | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 3 (100.0%) | 12 (92.3%) | 19 (95.0%) |
| | | Mean | 5.0 | 2.3 | 4.5 | 4.5 |
| | | SD | 1.4 | 2.1 | 5.2 | 4.6 |
| | | Median | 5.0 | 3.0 | 4.0 | 4.0 |
| | | Min | 4 | 0 | 0 | 0 |
| | | Max | 6 | 4 | 20 | 20 |
| | | Total missing | 1 | 0 | 3 | 5 |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total | | 1 | | 2 | 4 |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | missing | | | | | |
| Foot check | Yes | | 2 (100.0%) | 3 (100.0%) | 5 (50.0%) | 11 (64.7%) |
| | | Total valid numeric response (n) | 2 (100.0%) | 3 (100.0%) | 5 (50.0%) | 11 (64.7%) |
| | | Mean | 2.5 | 2.3 | 1.2 | 1.6 |
| | | SD | 0.7 | 2.1 | 1.6 | 1.6 |
| | | Median | 2.5 | 3.0 | 1.0 | 1.0 |
| | | Min | 2 | 0 | 0 | 0 |
| | | Max | 3 | 4 | 4 | 4 |
| | | Total missing | 1 | 0 | 10 | 13 |
| | No | | | | 5 (50.0%) | 6 (35.3%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 10 (100.0%) | 17 (100.0%) |
| | Total missing | | 1 | | 5 | 7 |
| Eye examination - Un-dilated | Yes | | 1 (50.0%) | 2 (66.7%) | 10 (90.9%) | 15 (83.3%) |
| | | Total valid numeric response (n) | 1 (50.0%) | 2 (66.7%) | 10 (90.9%) | 15 (83.3%) |
| | | Mean | 1.0 | 2.0 | 2.4 | 2.0 |
| | | SD | | 1.4 | 2.2 | 1.9 |
| | | Median | 1.0 | 2.0 | 1.5 | 1.0 |
| | | Min | 1 | 1 | 0 | 0 |
| | | Max | 1 | 3 | 6 | 6 |
| | | Total missing | 2 | 1 | 5 | 9 |
| | No | | 1 (50.0%) | 1 (33.3%) | 1 (9.1%) | 3 (16.7%) |
| | Total valid | | 2 (100.0%) | 3 (100.0%) | 11 (100.0%) | 18 (100.0%) |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | | response | | | | |
| | Total missing | | 1 | | 4 | 6 |
| Eye examination - Optical Coherence Tomography | Yes | | | 1 (33.3%) | 13 (100.0%) | 14 (73.7%) |
| | | Total valid numeric response (n) | 0 (0.0%) | 1 (33.3%) | 12 (92.3%) | 13 (68.4%) |
| | | Mean | | 0.0 | 3.2 | 2.9 |
| | | SD | | | 2.5 | 2.5 |
| | | Median | | 0.0 | 3.5 | 3.0 |
| | | Min | | 0 | 0 | 0 |
| | | Max | | 0 | 8 | 8 |
| | | Total missing | 3 | 2 | 3 | 11 |
| | No | | 2 (100.0%) | 2 (66.7%) | | 5 (26.3%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 19 (100.0%) |
| | Total missing | | 1 | | 2 | 5 |
| Eye examination - Fundoscopy | Yes | | 1 (50.0%) | 2 (66.7%) | 14 (100.0%) | 17 (85.0%) |
| | | Total valid numeric response (n) | 1 (50.0%) | 2 (66.7%) | 13 (92.9%) | 16 (80.0%) |
| | | Mean | 1.0 | 1.0 | 2.9 | 2.6 |
| | | SD | | 0.0 | 1.8 | 1.8 |
| | | Median | 1.0 | 1.0 | 3.0 | 2.5 |
| | | Min | 1 | 1 | 0 | 0 |
| | | Max | 1 | 1 | 6 | 6 |
| | | Total missing | 2 | 1 | 2 | 8 |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | No | | 1 (50.0%) | 1 (33.3%) | | 3 (15.0%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 14 (100.0%) | 20 (100.0%) |
| | Total missing | | 1 | | 1 | 4 |
| Eye examination - Fluorescein Angiography | Yes | | | 1 (33.3%) | 10 (83.3%) | 11 (61.1%) |
| | | Total valid numeric response (n) | 0 (0.0%) | 1 (33.3%) | 9 (75.0%) | 10 (55.6%) |
| | | Mean | | 0.0 | 1.0 | 0.9 |
| | | SD | | | 1.2 | 1.2 |
| | | Median | | 0.0 | 1.0 | 1.0 |
| | | Min | | 0 | 0 | 0 |
| | | Max | | 0 | 4 | 4 |
| | | Total missing | 3 | 2 | 6 | 14 |
| | No | | 2 (100.0%) | 2 (66.7%) | 2 (16.7%) | 7 (38.9%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 18 (100.0%) |
| | Total missing | | 1 | | 3 | 6 |
| Eye examination - Lipid check | Yes | | 1 (50.0%) | 2 (66.7%) | 9 (81.8%) | 14 (77.8%) |
| | | Total valid numeric response (n) | 1 (50.0%) | 2 (66.7%) | 9 (81.8%) | 14 (77.8%) |
| | | Mean | 2.0 | 2.0 | 1.6 | 1.8 |
| | | SD | | 2.8 | 1.3 | 1.4 |
| | | Median | 2.0 | 2.0 | 1.0 | 2.0 |
| | | Min | 2 | 0 | 0 | 0 |

| Type of Test | Yes/No | How often/year | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|---|
| | | Max | 2 | 4 | 4 | 4 |
| | | Total missing | 2 | 1 | 6 | 10 |
| | No | | 1 (50.0%) | 1 (33.3%) | 2 (18.2%) | 4 (22.2%) |
| | Total valid response | | 2 (100.0%) | 3 (100.0%) | 11 (100.0%) | 18 (100.0%) |
| | Total missing | | 1 | | 4 | 6 |

**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 | 2 (100.0%) | 3 (100.0%) | 5 (41.7%) | 12 (63.2%) |
| | Diet/nutrition | 2 (100.0%) | 3 (100.0%) | 6 (50.0%) | 13 (68.4%) |
| | Exercise/physical activity | 2 (100.0%) | 2 (66.7%) | 5 (41.7%) | 11 (57.9%) |
| | Medicines | 2 (100.0%) | 3 (100.0%) | 3 (25.0%) | 10 (52.6%) |
| | Foot care and inspection | 2 (100.0%) | 3 (100.0%) | 1 (8.3%) | 7 (36.8%) |
| | Blood pressure | 2 (100.0%) | 3 (100.0%) | 5 (41.7%) | 11 (57.9%) |
| | Eye care and exams | 1 (50.0%) | 2 (66.7%) | 12 (100.0%) | 16 (84.2%) |
| | Lipid check | 2 (100.0%) | 2 (66.7%) | 2 (16.7%) | 8 (42.1%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | 0 | 3 | 5 |

**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 | 1 (50.0%) | 2 (66.7%) | 9 (69.2%) | 12 (60.0%) |
| | Yes, but information on eye complications is not sufficient | 1 (50.0%) | 1 (33.3%) | 0 (0.0%) | 3 (15.0%) |
| | No written information is available for patients | 0 (0.0%) | 0 (0.0%) | 4 (30.8%) | 5 (25.0%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | 0 | 2 | 4 |

**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 | 2 (100.0%) | 2 (66.7%) | 6 (50.0%) | 11 (57.9%) |
| | Yes, available but not used by staff | 0 (0.0%) | 1 (33.3%) | 1 (8.3%) | 2 (10.5%) |
| | Not available | 0 (0.0%) | 0 (0.0%) | 4 (33.3%) | 5 (26.3%) |
| | Don't know/Not sure | 0 (0.0%) | 0 (0.0%) | 1 (8.3%) | 1 (5.3%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | 0 | 3 | 5 |

**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 | 2 (100.0%) | 2 (66.7%) | 7 (53.8%) | 12 (60.0%) |
| | Yes, available but not used by staff | 0 (0.0%) | 1 (33.3%) | 1 (7.7%) | 2 (10.0%) |
| | Not available | 0 (0.0%) | 0 (0.0%) | 5 (38.5%) | 6 (30.0%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | 0 | 2 | 4 |

**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) | 2 (100.0%) | 3 (100.0%) | 5 (41.7%) | 10 (52.6%) |
| | Mean | 5.0 | 5.0 | 6.0 | 5.5 |
| | SD | 0.0 | 0.0 | 2.2 | 1.6 |
| | Median | 5.0 | 5.0 | 5.0 | 5.0 |
| | Min | 5 | 5 | 5 | 5 |
| | Max | 5 | 5 | 10 | 10 |
| | After a predetermined age (numeric response) (n) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (5.3%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | Mean | | | | 30.0 |
| | SD | | | | |
| | Median | | | | 30.0 |
| | Min | | | | 30 |
| | Max | | | | 30 |
| | As soon as they are diagnosed | | | 2 (16.7%) | 2 (10.5%) |
| | No standard practice, timing varies case by case | | | 4 (33.3%) | 4 (21.1%) |
| | Don't know/Not sure | | | 1 (8.3%) | 2 (10.5%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | | 3 | 5 |
| 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%) | 0 (0.0%) |
| | Mean | | | | |
| | SD | | | | |
| | Median | | | | |
| | Min | | | | |
| | Max | | | | |
| | As soon as they are | 1 (50.0%) | 3 (100.0%) | 8 (61.5%) | 13 |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|----------|----------|----------|----------|----------|-----|
| | diagnosed | | | | (65.0%) |
| | When a patient reports eye/vision problems | | | 1 (7.7%) | 1 (5.0%) |
| | No standard practice, timing varies case by case | 1 (50.0%) | | 3 (23.1%) | 4 (20.0%) |
| | Don't know/Not sure | | | 1 (7.7%) | 2 (10.0%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | | 2 | 4 |

**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 | 2 (100.0%) | 3 (100.0%) | 12 (92.3%) | 18 (90.0%) |
| | Don't know/Not sure | 0 (0.0%) | 0 (0.0%) | 1 (7.7%) | 2 (10.0%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | 0 | 2 | 4 |

**PT 2.16**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|----------|----------|----------|----------|----------|-----|
| Do you screen patients for DR? | Yes | 2 (100.0%) | 2 (66.7%) | 12 (92.3%) | 17 (85.0%) |
| | No | | 1 (33.3%) | 1 (7.7%) | 3 (15.0%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | Total missing | 1 | | 2 | 4 |
| Where do you screen patients? | In clinic | 2 (100.0%) | 2 (100.0%) | 11 (91.7%) | 16 (94.1%) |
| | Outreach | | | 2 (16.7%) | 2 (11.8%) |
| | Other | | | 1 (8.3%) | 1 (5.9%) |
| | Total valid response | 2 (100.0%) | 2 (100.0%) | 12 (100.0%) | 17 (100.0%) |
| | Total missing | 1 | 1 | 3 | 7 |

**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 | 1 (50.0%) | 3 (100.0%) | 12 (92.3%) | 17 (85.0%) |
| | Patient's age | 0 (0.0%) | 1 (33.3%) | 6 (46.2%) | 8 (40.0%) |
| | Patient's gender | 0 (0.0%) | 0 (0.0%) | 4 (30.8%) | 4 (20.0%) |
| | Presence of comorbidities such as hypertension, etc. | 1 (50.0%) | 2 (66.7%) | 10 (76.9%) | 13 (65.0%) |
| | High glucose levels | 1 (50.0%) | 2 (66.7%) | 10 (76.9%) | 14 (70.0%) |
| | Ability or inability to pay | 0 (0.0%) | 0 (0.0%) | 2 (15.4%) | 2 (10.0%) |
| | Insurance restrictions | 0 (0.0%) | 0 (0.0%) | 2 (15.4%) | 2 (10.0%) |
| | Patient educational level | 0 (0.0%) | 0 (0.0%) | 3 (23.1%) | 3 (15.0%) |
| | Patient adherence to recommendations | 0 (0.0%) | 1 (33.3%) | 4 (30.8%) | 5 (25.0%) |
| | None of the above | 0 (0.0%) | 0 (0.0%) | 1 (7.7%) | 1 (5.0%) |
| | Not applicable | 1 (50.0%) | 0 (0.0%) | 0 (0.0%) | 2 (10.0%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | 0 | 2 | 4 |

**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%) | 0 (0.0%) | 3 (23.1%) | 3 (15.0%) |
| | Proximity to care | 0 (0.0%) | 0 (0.0%) | 5 (38.5%) | 5 (25.0%) |
| | Long wait time for appointment | 1 (50.0%) | 2 (66.7%) | 8 (61.5%) | 11 (55.0%) |
| | Long wait time on the day of visit | 0 (0.0%) | 0 (0.0%) | 5 (38.5%) | 5 (25.0%) |
| | Referral process | 1 (50.0%) | 1 (33.3%) | 6 (46.2%) | 8 (40.0%) |
| | Recommended treatments are not available | 0 (0.0%) | 0 (0.0%) | 2 (15.4%) | 2 (10.0%) |
| | Lack of knowledge and/or awareness | 0 (0.0%) | 2 (66.7%) | 8 (61.5%) | 10 (50.0%) |
| | Patients fear of treatment/results | 0 (0.0%) | 0 (0.0%) | 4 (30.8%) | 4 (20.0%) |
| | Patients they are a burden on family/friends | 0 (0.0%) | 0 (0.0%) | 1 (7.7%) | 1 (5.0%) |
| | Limited access to diabetes specialists | 0 (0.0%) | 1 (33.3%) | 4 (30.8%) | 6 (30.0%) |
| | Limited access to eye specialists | 1 (50.0%) | 1 (33.3%) | 2 (15.4%) | 4 (20.0%) |
| | Patients feel eye complications are unlikely | 0 (0.0%) | 1 (33.3%) | 3 (23.1%) | 4 (20.0%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | Patients feel eye exams are not important | 0 (0.0%) | 2 (66.7%) | 7 (53.8%) | 9 (45.0%) |
| | Patients have competing responsibilities and priorities | 0 (0.0%) | 1 (33.3%) | 3 (23.1%) | 4 (20.0%) |
| | Clinic too small or lack necessary equipment/staff | 0 (0.0%) | 1 (33.3%) | 1 (7.7%) | 3 (15.0%) |
| | Other | 0 (0.0%) | 0 (0.0%) | 1 (7.7%) | 1 (5.0%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 13 (100.0%) | 20 (100.0%) |
| | Total missing | 1 | 0 | 2 | 4 |

**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 | 1 (50.0%) | 1 (33.3%) | 8 (66.7%) | 11 (57.9%) |
| | No | 1 (50.0%) | 2 (66.7%) | 4 (33.3%) | 8 (42.1%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | 0 | 3 | 5 |

**PT 2.20**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| Do you share relevant patient information with other health care professionals involved in the patients care e.g. his or her general practitioner, ophthalmologist, podiastrist? | Yes | 2 (100.0%) | 3 (100.0%) | 7 (58.3%) | 14 (73.7%) |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | No | 0 (0.0%) | 0 (0.0%) | 5 (41.7%) | 5 (26.3%) |
| | Total Valid Response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | 0 | 3 | 5 |

**PT 3.1**

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| Please indicate your age: | 30 - 39 | | | 4 (33.3%) | 4 (21.1%) |
| | 40 - 49 | 2 (100.0%) | 3 (100.0%) | 2 (16.7%) | 7 (36.8%) |
| | 50 - 59 | | | 5 (41.7%) | 7 (36.8%) |
| | 80 - 89 | | | 1 (8.3%) | 1 (5.3%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | | 3 | 5 |
| What is your gender? | Female | 2 (100.0%) | 1 (33.3%) | 4 (33.3%) | 9 (47.4%) |
| | Male | | 2 (66.7%) | 8 (66.7%) | 10 (52.6%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 (100.0%) |
| | Total missing | 1 | | 3 | 5 |
| What is your highest level of education completed? | Secondary School | | | 1 (8.3%) | 1 (5.3%) |
| | College/University | | 1 (33.3%) | | 2 (10.5%) |
| | Graduate or advanced degree (e.g. PhD, MD, etc) | 2 (100.0%) | 2 (66.7%) | 11 (91.7%) | 16 (84.2%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) | 12 (100.0%) | 19 |

| Question | Response | Primary Care Provider | Diabetes Specialist Provider | Ophthalmologist | PAS |
|---|---|---|---|---|---|
| | | | | | (100.0%) |
| | Total missing | 1 | | 3 | 5 |

**PT 4.1**

| Question | Response | Ophthalmologist |
|---|---|---|
| What percentage of your patients have diabetic retinopathy | Total valid numeric response (n) | 11 |
| | Mean | 49.3 |
| | SD | 32.8 |
| | Median | 60.0 |
| | Min | 0 |
| | Max | 90 |
| | Total missing | 4 |

**PT 4.2**

| Question | Response | Ophthalmologist |
|---|---|---|
| What percentage of your patients have diabetic macular edema? | Total valid numeric response (n) | 11 |
| | Mean | 39.3 |
| | SD | 31.5 |
| | Median | 25.0 |
| | Min | 0 |
| | Max | 80 |
| | Total missing | 4 |

**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 | 2 (18.2%) |
| | More than 1 week but less than 1 month | 3 (27.3%) |
| | More than 3 months but less than 6 | 3 (27.3%) |

| Question | Response | Ophthalmologist |
|---|---|---|
| | months | |
| | Six or more months | 2 (18.2%) |
| | Don't know/Not sure | 1 (9.1%) |
| | Total Valid Response | 11 (100.0%) |
| | Total missing | 4 |

**PT 4.4**

| Question | Response | Ophthalmologist |
|---|---|---|
| From the time a patient is screened, what is the average length of time he/she waits for diagnosis? | Less than 1 week | 2 (18.2%) |
| | More than 1 week but less than 1 month | 2 (18.2%) |
| | More than 2 months but less than 3 months | 1 (9.1%) |
| | There is not wait, diagnosis is given when screened | 6 (54.5%) |
| | Total Valid Response | 11 (100.0%) |
| | Total missing | 4 |

**PT 4.5**

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| Laser photocoagulation | Is the treatment available? | Available within country | 3 (30.0%) |
| | | Available locally | 2 (20.0%) |
| | | Available in practice | 10 (100.0%) |
| | | Total valid response | 10 (100.0%) |
| | | Total missing | 5 |
| | What is the average amount of time your patients wait for a consultation appointment? (weeks) | Total valid numeric response (n) | 6 (85.7%) |
| | | Mean | 3.7 |
| | | SD | 3.6 |
| | | Median | 2.0 |
| | | Min | 1 |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Max | 10 |
| | | Not applicable | 1 (14.3%) |
| | | Total valid response | 7 (100.0%) |
| | | Total missing | 8 |
| | What is the average amount of time your patients wait for a first treatment?(weeks) | Total valid numeric response (n) | 5 (62.5%) |
| | | Mean | 2.8 |
| | | SD | 2.2 |
| | | Median | 2.0 |
| | | Min | 1 |
| | | Max | 6 |
| | | Don't know/not sure | 2 (25.0%) |
| | | Not applicable | 1 (12.5%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| | What is the average amount of time your patients wait for a second treatment?(weeks) | Total valid numeric response (n) | 5 (71.4%) |
| | | Mean | 5.8 |
| | | SD | 4.5 |
| | | Median | 6.0 |
| | | Min | 1 |
| | | Max | 12 |
| | | Don't know/not sure | 2 (28.6%) |
| | | Total valid response | 7 (100.0%) |
| | | Total missing | 8 |
| Anti-VEGF therapies | Is the treatment available? | Available within country | 3 (30.0%) |
| | | Available locally | 3 (30.0%) |
| | | Available in practice | 9 (90.0%) |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Total valid response | 10 (100.0%) |
| | | Total missing | 5 |
| | What is the average amount of time your patients wait for a consultation appointment? (weeks) | Total valid numeric response (n) | 6 (75.0%) |
| | | Mean | 4.3 |
| | | SD | 4.2 |
| | | Median | 3.0 |
| | | Min | 1 |
| | | Max | 12 |
| | | Don't know/not sure | 1 (12.5%) |
| | | Not applicable | 1 (12.5%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| | What is the average amount of time your patients wait for a first treatment?(weeks) | Total valid numeric response (n) | 5 (55.6%) |
| | | Mean | 3.2 |
| | | SD | 2.2 |
| | | Median | 4.0 |
| | | Min | 1 |
| | | Max | 6 |
| | | Don't know/not sure | 3 (33.3%) |
| | | Not applicable | 1 (11.1%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a second treatment?(weeks) | Total valid numeric response (n) | 5 (62.5%) |
| | | Mean | 6.2 |
| | | SD | 4.1 |
| | | Median | 6.0 |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Min | 1 |
| | | Max | 12 |
| | | Don't know/not sure | 3 (37.5%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| Intravitreal steroid | Is the treatment available? | Available within country | 3 (33.3%) |
| | | Available locally | 3 (33.3%) |
| | | Available in practice | 8 (88.9%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a consultation appointment? (weeks) | Total valid numeric response (n) | 5 (62.5%) |
| | | Mean | 4.4 |
| | | SD | 4.7 |
| | | Median | 2.0 |
| | | Min | 1 |
| | | Max | 12 |
| | | Don't know/not sure | 2 (25.0%) |
| | | Not applicable | 1 (12.5%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| | What is the average amount of time your patients wait for a first treatment?(weeks) | Total valid numeric response (n) | 4 (50.0%) |
| | | Mean | 3.3 |
| | | SD | 2.2 |
| | | Median | 3.0 |
| | | Min | 1 |
| | | Max | 6 |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Don't know/not sure | 3 (37.5%) |
| | | Not applicable | 1 (12.5%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| | What is the average amount of time your patients wait for a second treatment?(weeks) | Total valid numeric response (n) | 4 (50.0%) |
| | | Mean | 7.8 |
| | | SD | 5.3 |
| | | Median | 9.0 |
| | | Min | 1 |
| | | Max | 12 |
| | | Don't know/not sure | 4 (50.0%) |
| | | Total valid response | 8 (100.0%) |
| | | Total missing | 7 |
| Uncomplicated vitrectomy | Is the treatment available? | Available within country | 4 (40.0%) |
| | | Available locally | 3 (30.0%) |
| | | Available in practice | 8 (80.0%) |
| | | Total valid response | 10 (100.0%) |
| | | Total missing | 5 |
| | What is the average amount of time your patients wait for a consultation appointment? (weeks) | Total valid numeric response (n) | 6 (66.7%) |
| | | Mean | 6.2 |
| | | SD | 8.8 |
| | | Median | 3.0 |
| | | Min | 1 |
| | | Max | 24 |
| | | Don't know/not sure | 2 (22.2%) |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Not applicable | 1 (11.1%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a first treatment?(weeks) | Total valid numeric response (n) | 4 (44.4%) |
| | | Mean | 3.3 |
| | | SD | 1.5 |
| | | Median | 4.0 |
| | | Min | 1 |
| | | Max | 4 |
| | | Don't know/not sure | 3 (33.3%) |
| | | Not applicable | 2 (22.2%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a second treatment?(weeks) | Total valid numeric response (n) | 4 (44.4%) |
| | | Mean | 10.5 |
| | | SD | 10.0 |
| | | Median | 8.0 |
| | | Min | 2 |
| | | Max | 24 |
| | | Don't know/not sure | 4 (44.4%) |
| | | Not applicable | 1 (11.1%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| Complex vitreo-retinal surgery | Is the treatment available? | Available within country | 4 (40.0%) |
| | | Available locally | 2 (20.0%) |
| | | Available in practice | 7 (70.0%) |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Total valid response | 10 (100.0%) |
| | | Total missing | 5 |
| | What is the average amount of time your patients wait for a consultation appointment? (weeks) | Total valid numeric response (n) | 6 (66.7%) |
| | | Mean | 6.5 |
| | | SD | 8.7 |
| | | Median | 4.0 |
| | | Min | 1 |
| | | Max | 24 |
| | | Don't know/not sure | 2 (22.2%) |
| | | Not applicable | 1 (11.1%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a first treatment?(weeks) | Total valid numeric response (n) | 4 (44.4%) |
| | | Mean | 4.5 |
| | | SD | 2.5 |
| | | Median | 4.0 |
| | | Min | 2 |
| | | Max | 8 |
| | | Don't know/not sure | 3 (33.3%) |
| | | Not applicable | 2 (22.2%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |
| | What is the average amount of time your patients wait for a second treatment?(weeks) | Total valid numeric response (n) | 4 (44.4%) |
| | | Mean | 13.0 |
| | | SD | 10.5 |
| | | Median | 12.0 |

| Type of Treatment | Question | Response/time | Ophthalmologist |
|---|---|---|---|
| | | Min | 4 |
| | | Max | 24 |
| | | Don't know/not sure | 4 (44.4%) |
| | | Not applicable | 1 (11.1%) |
| | | Total valid response | 9 (100.0%) |
| | | Total missing | 6 |

**PT 4.6**

| Question | Response | Ophthalmologist |
|---|---|---|
| Do you personally administer treatment for diabetic retinopathy? | Yes | 9 (90.0%) |
| | No | 1 (10.0%) |
| | Total valid response | 10 (100.0%) |
| | Total missing | 5 |
| Who administer it? | Another provider in your practice | 1 (100.0%) |
| | Total valid response | 1 (100.0%) |
| | Total missing | 14 |

**PT 4.7**

| Question | Response | Ophthalmologist |
|---|---|---|
| Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema? | Diabetes duration | 5 (55.6%) |
| | Patient's age | 2 (22.2%) |
| | Patient's gender | 2 (22.2%) |
| | Presence of comorbidities such as hypertension, etc. | 6 (66.7%) |
| | High glucose levels | 4 (44.4%) |
| | Ability or inability to pay | 2 (22.2%) |
| | Insurance restrictions | 1 (11.1%) |
| | Patient educational level | 3 (33.3%) |
| | Patient adherence to recommendations | 6 (66.7%) |

| Question | Response | Ophthalmologist |
|---|---|---|
| | None of the above | 2 (22.2%) |
| | Total valid response | 9 (100.0%) |
| | Total missing | 6 |

**PT 4.8**

| Question | Response | Ophthalmologist |
|---|---|---|
| Do you treat diabetic retinopathy and diabetic macular edema based on: | Both | 10 (100.0%) |
| | Total Valid Response | 10 (100.0%) |
| | Total missing | 5 |

**PT 4.9**

| Question | Response | Ophthalmologist |
|---|---|---|
| How are your patients with diabetes screened for diabetic eye disease? | Fundoscopy undilated | 3 (30.0%) |
| | Fundoscopy dilated | 10 (100.0%) |
| | Retinal photo | 4 (40.0%) |
| | Optical Coherence Tomography | 8 (80.0%) |
| | Fluorescein Angiography | 4 (40.0%) |
| | Total valid response | 10 (100.0%) |
| | Total missing | 5 |

**PT 4.10**

| Question | Response | Ophthalmologist |
|---|---|---|
| In your opinion, do the majority of your patients present: | In time for screening | 2 (20.0%) |
| | When visual problems have already occurred | 7 (70.0%) |
| | Too late for effective treatment | 1 (10.0%) |
| | Total Valid Response | 10 (100.0%) |
| | Total missing | 5 |

**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 | 9 (90.0%) |
| | No | 1 (10.0%) |
| | Total valid response | 10 (100.0%) |
| | Total missing | 5 |
| If yes, When was your last training? | Five or more years ago | 5 (55.6%) |
| | Greater than 1 year ago but less than 5 years | 2 (22.2%) |
| | Within the past year | 2 (22.2%) |
| | Total valid response | 9 (100.0%) |
| | Total missing | 6 |

**PT 4.12**

| Question | Response | Ophthalmologist |
|---|---|---|
| Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies? | Yes | 6 (60.0%) |
| | No | 4 (40.0%) |
| | Total Valid Response | 10 (100.0%) |
| | Total missing | 5 |

**PT 4.13**

| Question | Response | Ophthalmologist |
|---|---|---|
| How is outreach for screening for diabetic eye disease done in your main practice? | Health fairs for all | 2 (22.2%) |
| | Health fairs for people with diabetes | 4 (44.4%) |
| | Mobile screening centers | 1 (11.1%) |
| | At vision centers | 2 (22.2%) |
| | Other | 1 (11.1%) |
| | Not done | 4 (44.4%) |
| | Don't know/Not sure | 1 (11.1%) |
| | Total valid response | 9 (100.0%) |

| Question | Response | Ophthalmologist |
|---|---|---|
| | Total missing | 6 |

**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 | 2 (22.2%) |
| | Late diagnosis | 5 (55.6%) |
| | Referral pathways | 3 (33.3%) |
| | Limited access to patient education on diabetic retinopathy and diabetic macular edema | 5 (55.6%) |
| | No universal guidelines on referral/screening | 3 (33.3%) |
| | No universal guidelines on how to treat | 2 (22.2%) |
| | No universal guideline on when to treat | 2 (22.2%) |
| | Current available therapies not effective | 1 (11.1%) |
| | Government/insurance not able to cover patient costs | 1 (11.1%) |
| | Multi-disciplinary team integration is poor | 4 (44.4%) |
| | Ineffective screening services | 5 (55.6%) |
| | Total valid response | 9 (100.0%) |
| | Total missing | 6 |

**EXP 1**

| Question | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| Which of the following complications of diabetes do you have? | Amputation | 2 (6.9%) | 2 (33.3%) | 3 (75.0%) |
| | Loss of feeling in hands or toes (neuropathy) | 6 (20.7%) | 3 (50.0%) | 1 (25.0%) |
| | Broken bones or fractures | 0 (0.0%) | 2 (33.3%) | 1 (25.0%) |
| | Vision loss | 1 (3.4%) | 0 (0.0%) | 1 (25.0%) |
| | Foot ulcers | 4 (13.8%) | 0 (0.0%) | 1 (25.0%) |

| Question | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| | Irritable bowel disease | 4 (13.8%) | 1 (16.7%) | 0 (0.0%) |
| | Kidney disease | 1 (3.4%) | 2 (33.3%) | 0 (0.0%) |
| | Other | 1 (3.4%) | 1 (16.7%) | 0 (0.0%) |
| | None | 15 (51.7%) | 0 (0.0%) | 0 (0.0%) |
| | Don't know/Not sure | 2 (6.9%) | 0 (0.0%) | 0 (0.0%) |
| | Total Valid Response | 29 (100.0%) | 6 (100.0%) | 4 (100.0%) |
| | Total missing | 5 | 0 | 0 |

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
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 | 5 (17.2%) | 0 (0.0%) | 3 (75.0%) |
| Impairment or health problem | | | |
| Diabetes | 5 (83.3%) | 0 (0.0%) | 2 (100.0%) |
| Back or neck problem | 4 (66.7%) | 0 (0.0%) | 1 (50.0%) |
| Walking problem | 3 (50.0%) | 0 (0.0%) | 0 (0.0%) |
| Hypertension/high blood pressure | 2 (40.0%) | 0 (0.0%) | 1 (50.0%) |
| Mental or emotional health | 2 (40.0%) | 0 (0.0%) | 2 (100.0%) |
| Arthritis/rheumatism | 1 (20.0%) | 0 (0.0%) | 2 (66.7%) |
| Fractures, bone/joint injury | 1 (20.0%) | 0 (0.0%) | 1 (50.0%) |
| Hearing problem | 1 (20.0%) | 0 (0.0%) | 0 (0.0%) |
| Heart problem | 0 (0.0%) | 0 (0.0%) | 1 (50.0%) |
| Eye/vision problem | 0 (0.0%) | 0 (0.0%) | 1 (50.0%) |
| Cancer | 0 (0.0%) | 0 (0.0%) | 1 (50.0%) |

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 | 23 (82.1%) | 4 (80.0%) | 3 (100.0%) |
| Self-rated health: Poor | 5 (17.9%) | 1 (20.0%) | 0 (0.0%) |

| Health Status | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|
| Physically unhealthy days | 13 (61.9%) | 1 (33.3%) | 2 (50.0%) |
| Mentally unhealthy days | 14 (58.3%) | 3 (75.0%) | 2 (50.0%) |
| Unhealthy days | 18 (81.8%) | 3 (75.0%) | 2 (50.0%) |
| Activity limitation days | 11 (52.4%) | 2 (50.0%) | 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 | 29 (67.4%) | 12 (75.0%) | 11 (64.7%) |
| | Oral medicine | 20 (46.5%) | 7 (43.8%) | 10 (58.8%) |
| | Exercise | 15 (34.9%) | 5 (31.3%) | 7 (41.2%) |
| | Insulin | 13 (30.2%) | 5 (31.3%) | 4 (23.5%) |
| | Natural/Herbal medicine | 4 (9.3%) | 1 (6.3%) | 2 (11.8%) |
| | None of the above | 1 (2.3%) | | |

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

**EXP 5.1**

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| Are you currently working? | Working for pay | 21 (72.4%) | 3 (60.0%) | 1 (25.0%) |
| | Working without pay at home (e.g. housework, farming) | 4 (13.8%) | 1 (20.0%) | 1 (25.0%) |
| | Student | 3 (10.3%) | 1 (20.0%) | 1 (25.0%) |
| | Not working | 1 (3.4%) | 0 (0.0%) | 1 (25.0%) |
| | Total Valid Response | 29 (100.0%) | 5 (100.0%) | 4 (100.0%) |
| | Total missing | 5 | 1 | 0 |
| Do you receive assistance from the government? | Income assistance | 4 (13.8%) | 0 (0.0%) | 2 (50.0%) |
| | Medical assistance | 3 (10.3%) | 1 (20.0%) | 0 (0.0%) |
| | Food assistance | 3 (10.3%) | 1 (20.0%) | 0 (0.0%) |

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| | Housing assistance | 1 (3.4%) | 0 (0.0%) | 0 (0.0%) |
| | Pension assistance | 0 (0.0%) | 1 (20.0%) | 0 (0.0%) |
| | None of the above | 23 (79.3%) | 3 (60.0%) | 2 (50.0%) |
| | Total valid response | 29 (100.0%) | 5 (100.0%) | 4 (100.0%) |
| | Total missing | 5 | 1 | 0 |
| Did you have trouble paying for food at anytime during the past year? | Yes | 12 (41.4%) | 1 (20.0%) | 4 (100.0%) |
| | No | 17 (58.6%) | 4 (80.0%) | 0 (0.0%) |
| | Total Valid Response | 29 (100.0%) | 5 (100.0%) | 4 (100.0%) |
| | Total missing | 5 | 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 | 13 (65.0%) | 3 (75.0%) | 1 (25.0%) |
| | Working without pay at home (e.g. housework, farming) | 4 (20.0%) | 0 (0.0%) | 1 (25.0%) |
| | Student | 3 (15.0%) | 1 (25.0%) | 1 (25.0%) |
| | Not working | 0 (0.0%) | 0 (0.0%) | 1 (25.0%) |
| | Total Valid Response | 20 (100.0%) | 4 (100.0%) | 4 (100.0%) |
| | Total missing | 2 | 1 | 0 |
| Do you receive assistance from the government? | Income assistance | 4 (20.0%) | 0 (0.0%) | 2 (50.0%) |
| | Medical assistance | 3 (15.0%) | 1 (25.0%) | 0 (0.0%) |
| | Food assistance | 3 (15.0%) | 0 (0.0%) | 0 (0.0%) |
| | Housing assistance | 1 (5.0%) | 0 (0.0%) | 0 (0.0%) |
| | None of the above | 14 (70.0%) | 3 (75.0%) | 2 (50.0%) |
| | Total valid response | 20 (100.0%) | 4 (100.0%) | 4 (100.0%) |

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| | Total missing | 2 | 1 | 0 |
| Did you have trouble paying for food at anytime during the past year? | Yes | 10 (50.0%) | 1 (25.0%) | 4 (100.0%) |
| | No | 10 (50.0%) | 3 (75.0%) | 0 (0.0%) |
| | Total Valid Response | 20 (100.0%) | 4 (100.0%) | 4 (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".*

## EXP 5.3: Age group 40-59 years

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| Are you currently working? | Working for pay | 7 (87.5%) | 0 (0.0%) | 0 (0.0%) |
| | Working without pay at home (e.g. housework, farming) | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) |
| | Not working | 1 (12.5%) | 0 (0.0%) | 0 (0.0%) |
| | Total Valid Response | 8 (100.0%) | 1 (100.0%) | 0 (0.0%) |
| | Total missing | 2 | 0 | 0 |
| Do you receive assistance from the government? | Food assistance | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) |
| | Pension assistance | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) |
| | None of the above | 8 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total valid response | 8 (100.0%) | 1 (100.0%) | 0 |
| | Total missing | 2 | 0 | 0 |
| Did you have trouble paying for food at anytime during the past year? | Yes | 2 (25.0%) | 0 (0.0%) | 0 (0.0%) |
| | No | 6 (75.0%) | 1 (100.0%) | 0 (0.0%) |
| | Total Valid Response | 8 (100.0%) | 1 (100.0%) | 0 (0.0%) |
| | Total missing | 2 | 0 | 0 |

## EXP 5.4: Age group 60-79 years

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| Are you currently working? | Working for pay | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total Valid Response | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total missing | 1 | 0 | 0 |
| Do you receive assistance from the government? | None of the above | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total valid response | 1 (100.0%) | 0 | 0 |
| | Total missing | 1 | 0 | 0 |
| Did you have trouble paying for food at anytime during the past year? | No | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total Valid Response | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Total missing | 1 | 0 | 0 |

## EXP 5.5: Age group 80+ years

| Item | Response | Without DED (%) | With DED (%) | With DME (%) |
|---|---|---|---|---|
| Are you currently working? | | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| Do you receive assistance from the government? | Total valid response | 0 | 0 | 0 |
| | Total missing | 0 | 0 | 0 |
| Did you have trouble paying for food at anytime during the past year? | | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |

## EXP 6

| Group | Subgroup | All respondents | Type 1 diabetes | Type 2 diabetes | With DED (%) | With DME (%) |
|---|---|---|---|---|---|---|
| All | | 44 (100%) | 17 (38.6%) | 17 (38.6%) | 6 (13.6%) | 4 (9.1%) |

| Group | Subgroup | All respondents | Type 1 diabetes | Type 2 diabetes | With DED (%) | With DME (%) |
|---|---|---|---|---|---|---|
| respondents | | | | | | |
| Gender | Male | 29 (78.4%) | 11 (37.9%) | 10 (34.5%) | 3 (10.3%) | 1 (3.4%) |
| | Female | 8 (21.6%) | 4 (50.0%) | 2 (25.0%) | 2 (25.0%) | 3 (37.5%) |
| | Total Missing | 7 | 2 | 5 | 1 | 0 |
| Age | 18-39 yrs | 31 (70.5%) | 15 (48.4%) | 10 (32.3%) | 5 (16.1%) | 4 (12.9%) |
| | 40-59 yrs | 11 (25.0%) | 1 (9.1%) | 6 (54.5%) | 1 (9.1%) | 0 (0.0%) |
| | 60-79 yrs | 2 (4.5%) | 1 (50.0%) | 1 (50.0%) | 0 (0.0%) | 0 (0.0%) |
| Time since diagnosis | Within the last year | 15 (34.1%) | 8 (53.3%) | 4 (26.7%) | 3 (20.0%) | 1 (6.7%) |
| | 1 - 5 years ago | 16 (36.4%) | 7 (43.8%) | 5 (31.3%) | 1 (6.3%) | 3 (18.8%) |
| | 6 - 10 years ago | 6 (13.6%) | 0 (0.0%) | 5 (83.3%) | 0 (0.0%) | 0 (0.0%) |
| | 11 - 15 years ago | 4 (9.1%) | 1 (25.0%) | 2 (50.0%) | 1 (25.0%) | 0 (0.0%) |
| | 16 - 20 years ago | 1 (2.3%) | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| | 21 years ago or longer | 1 (2.3%) | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) | 0 (0.0%) |
| | Don't know/Not sure | 1 (2.3%) | 0 (0.0%) | 0 (0.0%) | 1 (100.0%) | 0 (0.0%) |
| Control of Diabetes | Controlled | 33 (82.5%) | 15 (45.5%) | 11 (33.3%) | 6 (18.2%) | 4 (12.1%) |
| | Not controlled | 7 (17.5%) | 1 (14.3%) | 3 (42.9%) | 0 (0.0%) | 0 (0.0%) |
| | Total Missing | 4 | 1 | 3 | 0 | 0 |

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

**EXP 7**

| Question | Response | With DED n (%) | With DME n (%) |
|---|---|---|---|
| Have you had any treatment for diabetic eye disease? | Yes | 2 (33.3%) | 3 (100.0%) |
| | No | 4 (66.7%) | 0 (0.0%) |
| | Total valid response | 6 (100.0%) | 3 (100.0%) |
| | Total missing | 0 | 1 |

| Question | Response | With DED n (%) | With DME n (%) |
|---|---|---|---|
| What treatment did you receive? | Laser | 1 (50.0%) | 2 (66.7%) |
| | Anti-VEGF | 2 (100.0%) | 0 (0.0%) |
| | Surgery | 0 (0.0%) | 1 (33.3%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) |
| | Total missing | 4 | 1 |
| Did you complete the treatment? | Yes | 1 (50.0%) | 3 (100.0%) |
| | Still receiving treatment | 1 (50.0%) | 0 (0.0%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) |
| | Total missing | 4 | 1 |
| Do you feel that the treatment worked? | Yes, and vision improved | 1 (50.0%) | 2 (66.7%) |
| | Yes, but vision stayed the same | 1 (50.0%) | 1 (33.3%) |
| | Total valid response | 2 (100.0%) | 3 (100.0%) |
| | Total missing | 4 | 1 |
| What is/are the reason(s) that you did not complete the treatment? | Total valid response | 0 (0.0%) | 0 (0.0%) |
| | Total missing | 6 | 4 |
| What are the reason(s) that you have not had treatment for diabetic eye disease? | My doctor did not recommend any treatment | 2 (66.7%) | 0 (0.0%) |
| | Still waiting for treatment | 2 (66.7%) | 0 (0.0%) |
| | Too expensive | 1 (33.3%) | 0 (0.0%) |
| | I'm too busy | 1 (33.3%) | 0 (0.0%) |
| | Total valid response | 3 (100.0%) | 0 (0.0%) |
| | Total missing | 3 | 4 |

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

# DR
# Barometer
## Shifting the needle