

Diabetic Retinopathy: A Call for Global Action

A policy brief by the International Agency for the Prevention
of Blindness and the International Diabetes Federation



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Introduction

About this policy brief

The International Agency for the Prevention of Blindness (IAPB) and the International Diabetes Federation (IDF) have developed this policy brief to target advocates, healthcare professionals and policymakers in the area of diabetes and eye health, and to provide recommendations to effectively prevent and manage diabetic retinopathy (DR) to avoid vision loss in people living with diabetes.

This policy brief:

- highlights the links between diabetes and DR;
- underscores the impact and severity of DR for people living with diabetes,
- demonstrates the need to develop a multisectoral approach to prevent and treat both conditions,
- provides policy recommendations to improve prevention and care – ultimately improving the lives of people with diabetes and DR or at risk of developing DR,
- shares lived experiences of people living with DR.

About the International Agency for the Prevention of Blindness

The International Agency for the Prevention of Blindness (IAPB) is the overarching alliance for global eye health with around 200 members organisations from over 100 countries, working together for a world where everyone has universal access to eye care. IAPB is the global voice for the eye care sector and carries a proud heritage of leading international efforts in the prevention of blindness since 1975. It is recognised as a global leader in eye health advocacy, coordinating major campaigns such as World Sight Day and leading initiatives like 2030 In Sight, the UN Friends of Vision, VISION 2020 and Vision for the Commonwealth.

IAPB's key priorities are:

- **Global advocacy** to raise the profile of eye care so it receives the attention and resources needed to achieve universal access to eye health.
- **Connecting knowledge**, providing authoritative data and information and enabling access to up-to-date knowledge, information and practice.
- **Leading global campaigns** and working with our global membership to ensure eye health receives the global political, health and development focus it needs and deserves.

Learn more about IAPB at iapb.org

About the International Diabetes Federation

The International Diabetes Federation (IDF) is an umbrella organisation of over 240 national diabetes associations in more than 160 countries and territories working together to improve the lives and empower the 537 million people living with diabetes and prevent diabetes in those at risk. As the global voice of the diabetes community since 1950, IDF is engaged in actions to tackle diabetes from the local to the global level – from community programmes to worldwide awareness and advocacy initiatives. IDF activities aim to influence policy, increase public awareness, encourage health improvement, promote the exchange of high-quality information about diabetes, provide education for people with diabetes and their healthcare providers, and ensure the availability of appropriate medications for diabetes management and complications, both in times of peace and conflict.

Learn more about IDF at idf.org

The global impact of diabetes and diabetic retinopathy

What is diabetes?

Diabetes is a metabolic disorder characterised by high blood glucose (sugar) levels. Insulin, a hormone secreted by the pancreas, facilitates the uptake of glucose derived from the nutrients we consume which is circulated by the bloodstream into the body's cells to produce energy. However, in people with diabetes, the body either does not produce enough insulin or the cells fail to respond to insulin normally. This is known as insulin resistance. Both conditions lead to elevated blood glucose levels, known as hyperglycaemia. If left untreated over time, these high blood glucose levels can damage different organs and tissues, increasing the risk of developing severe comorbidities, including eye disease, chronic kidney disease, nerve damage, diabetic foot disease, hypertension, cardiovascular events such as myocardial infarction, stroke and heart failure, which can lead to disability and death if treatment is delayed.

There are two main types of diabetes: type 1 diabetes and type 2 diabetes. People with **type 1 diabetes** often have little to no insulin production and are usually diagnosed in childhood or early adulthood. Because of the body's inability to produce sufficient insulin, people with type 1 diabetes rely on daily insulin injections to maintain blood glucose levels within the normal range.

Accounting for **more than 95% of all diabetes, type 2 diabetes** is the most common type of diabetes. In people with type 2 diabetes, the body is unable to produce sufficient insulin and/or properly use insulin because of insulin resistance. This leads to a chain reaction in which the pancreas can no longer produce sufficient insulin to manage the elevated glucose levels in the blood and where the pancreas can eventually fail. Lifestyle modifications, including increased physical activity and implementing a healthy diet to avoid overweight, are the mainstay of treatment. However, over time, most people with type 2 diabetes will require oral and/or injectable medication, like insulin, to manage blood glucose levels.

Globally, 537 million adults aged 20-79 years are living with diabetes, a number that is predicted to reach 1.3 billion in 50 years. The high prevalence of type 2 diabetes continues to rise worldwide and is particularly rapid in low- and middle-income countries.¹ In these settings, there is limited availability and affordability of healthcare services for screening and treating diabetes-related complications, such as retinopathy, to prevent vision loss.

Key diabetes statistics (2021):

- 537 million adults live with diabetes, of which over 95% have type 2 diabetes.
- 75% of adults with diabetes (433 million) live in low- and middle-income countries.
- 45% of adults with diabetes (240 million) are undiagnosed, which increases the risk of diabetes-related complications.
- Diabetes is responsible for 6.7 million deaths annually — excluding the mortality risks associated with situations such as COVID-19.
- Diabetes accounts for US\$ 966 billion of healthcare expenditure — 11.5% of the total healthcare spent on adult healthcare worldwide.
- 860 million adults have intermediate hyperglycaemia (sometimes called prediabetes), which includes 541 million with impaired glucose tolerance and 319 million with impaired fasting glucose, which significantly increases the risk of developing type 2 diabetes.



Image courtesy of IDF



Mr Shamsul Bahri Othman

Malaysia

I was diagnosed with type 2 diabetes in 2018 at 43 and four years later with diabetic retinopathy. I had never heard about diabetic retinopathy before this diagnosis. My doctor had never explained my risk of developing it. However, I did know about it from the internet by searching for possible diabetes complications. Since I didn't have any symptoms initially, I didn't think it could happen to me.

One morning, I woke up and had a sudden vision loss in my left eye, and then the vision in my right eye became blurred. I couldn't even find my way to the toilet. A neighbour helped me go to the hospital, where I learned there was bleeding inside my left eye and cataracts in both eyes. There was also evidence of diabetic changes in the macula of my right eye.

After this, I was referred to a vitreoretinal surgeon who told me about the seriousness of my eye condition and the possibility of a "guarded visual outcome", meaning my vision may not improve completely even following treatment.

My diagnosis of diabetic retinopathy has had a big impact on my daily life. I couldn't drive my kids to school and the diagnosis also affected my wife. I cannot work independently as a mechanic, and a colleague has to verify my work.

I was also impacted psychologically. At first, I was depressed and scared that I might lose my vision and not be able to support my family of five. There was no professional psychological support to help me deal with the diagnosis, but thanks to my family, including my sisters and brothers, who, in addition to words of encouragement, helped financially during my hospitalisation and surgery.

The treatment for my right eye requires laser and intravitreal injections. So far, I've had four. I underwent a vitrectomy and laser with silicone oil injections in my left eye. The silicon oil in my left eye was removed after six months, and a cataract extraction with a lens implant was done at the same time. I still have regular follow-ups and injections to the right eye if necessary.

Through all of this, my family and friends remained very supportive. But my healthcare team, not as much. That's to say, I didn't have extra care before my eye symptoms.

I think the government should improve the prevention and treatment of type 2 diabetes and diabetic retinopathy. Firstly, there should be more awareness of diabetes, its complications and prevention. Secondly, for those living with diabetes, especially with ocular complications like me, we should receive psychological support, especially at the beginning of the complications, to understand the disease and how to manage it.

What is diabetic retinopathy?

Diabetic retinopathy (DR) is a chronic progressive disease of the retinal capillaries (small blood vessels) associated with prolonged raised blood glucose levels in people with diabetes. Weakened and blocked capillaries in the retina (back of the eye) result in a range of different changes, collectively known as DR. DR is a serious diabetes complication and can cause vision impairment (VI) and blindness. Two main routes lead to vision loss: the growth/proliferation of new retinal vessels causing haemorrhage and retinal detachment (proliferative retinopathy); and localised damage resulting in oedema and swelling at the macula, affecting central vision (maculopathy).

DR is an end organ damage in diabetes and the most common microvascular diabetes complication. DR is one of the most common causes of irreversible vision loss globally. DR is also the only leading cause of blindness that showed a global increase in age-standardised prevalence between 1990 and 2020.² The estimated global prevalence of DR among people with diabetes is approximately 22%, with variations between countries.³ High-income countries tend to diagnose diabetes earlier, and therefore, the prevalence of DR is lower than in resource-constrained settings where the diabetes diagnosis is often made when complications have already occurred.⁴

All people with diabetes are at risk of developing DR, although those with poor blood glucose and blood pressure management and hyperlipidaemia are most at risk. The early stages of DR rarely cause noticeable vision changes. Therefore, people with diabetes need regular retinal exams to identify those who require treatment for DR to avoid VI. Early detection can lead to timely treatment of DR, which can prevent 95% of VI and blindness.⁵

The retina can be visualised to identify the signs of vision threatening diseases which require prompt treatment. Different classifications are available to determine the severity of DR. The widely used International Clinical Diabetic Retinopathy (ICDR) Severity Scale, classifies DR into five severity scales. In general, the term retinopathy encompasses both retinopathy and maculopathy. People with diabetes are referred to the eye clinic for further assessment and possible treatment when there is suspicion of moderate retinopathy or worse and/or diabetic maculopathy.⁴

Key diabetic retinopathy statistics:

- DR is the fifth most common cause of moderate to severe VI and blindness globally.⁶
- DR is the only one of the five leading causes of blindness that has increased globally between 1990 and 2020.⁶
- In many countries DR is the leading cause of blindness in the working age population.²
- Globally, approximately 1 in 5 people with diabetes have some degree of DR, with some variations across populations.³
- Globally 1 in 10 people with diabetes will develop a vision threatening form of the disease.³
- In 2020, an estimated 103 million adults had DR, and over 47 million had vision threatening retinopathy requiring prompt treatment to preserve vision.³



Ms Janelle Coquhoun

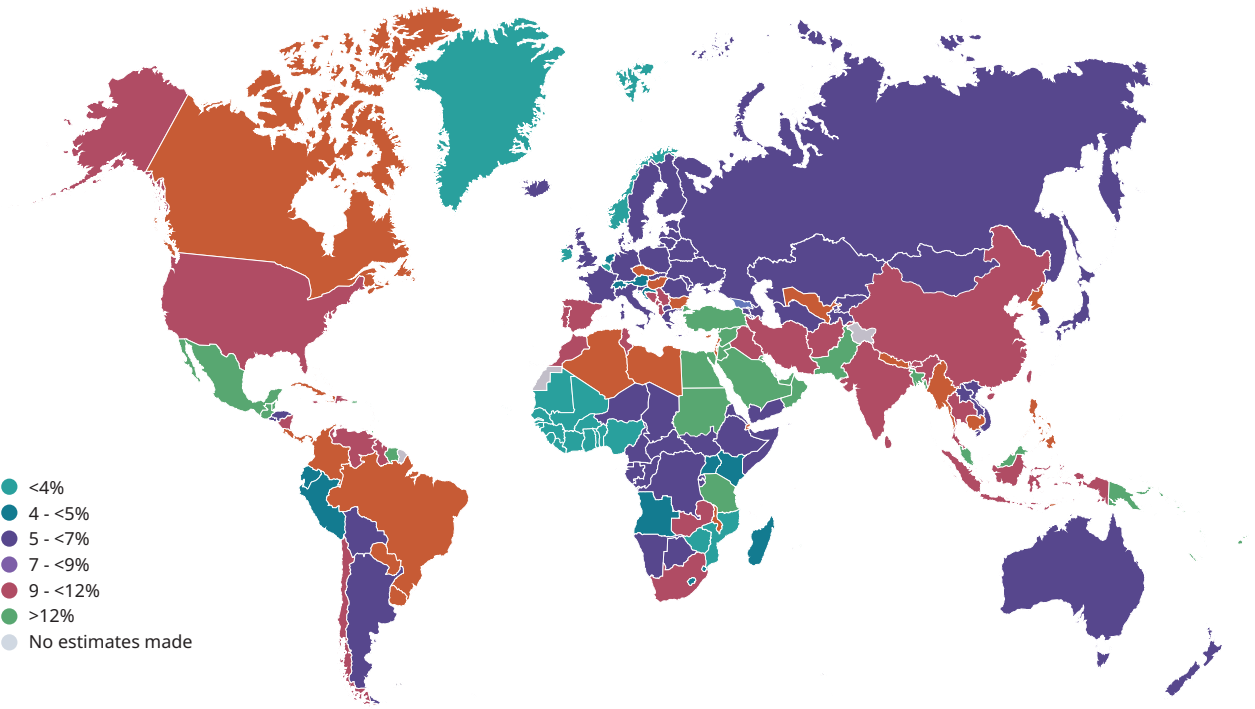
Australia

I was diagnosed with type 1 diabetes in 1977 at the age of ten and with diabetic retinopathy when I was twenty. Before my diagnosis, I had heard about diabetic retinopathy from my doctor and diabetes organisation magazines, but I didn't take it seriously. I experienced symptoms of high blood glucose, such as blurred vision, and learned of changes in my retina during check-ups.

I didn't change my life because of DR at first. I partied hard and didn't stick to my diabetes management plan. But things changed when I started losing my sight. I had night blindness and needed help getting to work. Laser treatment helped, but I didn't want to wear glasses and lost my job because I couldn't see well. DR affected my mental health when I had an operation to re-attach my retinas. Countless laser treatments followed, and I lost my night vision. Losing my sight from DR made me angry and frustrated, taking away my independence. I tried but couldn't find any support or counselling for people with diabetes and DR.

Initially, I felt my healthcare team was unsupportive and lectured me unnecessarily. However, when I started experiencing vision loss and needed laser treatment and eye surgery, they became very supportive and helped me through it all. I believe the Government should improve the prevention and treatment of diabetes and diabetic retinopathy by promoting healthy lifestyles, educating about risks and complications, and offering free programmes for people newly diagnosed and at risk. They should also provide access to free CGMs to monitor blood glucose levels better.

Map 1. Estimated age-adjusted comparative prevalence of diabetes in adults (20-79 years) in 2021⁷



Map 2. Prevalence of diabetic retinopathy in adults with diabetes (20-87 years) in 2020 by IDF Region³

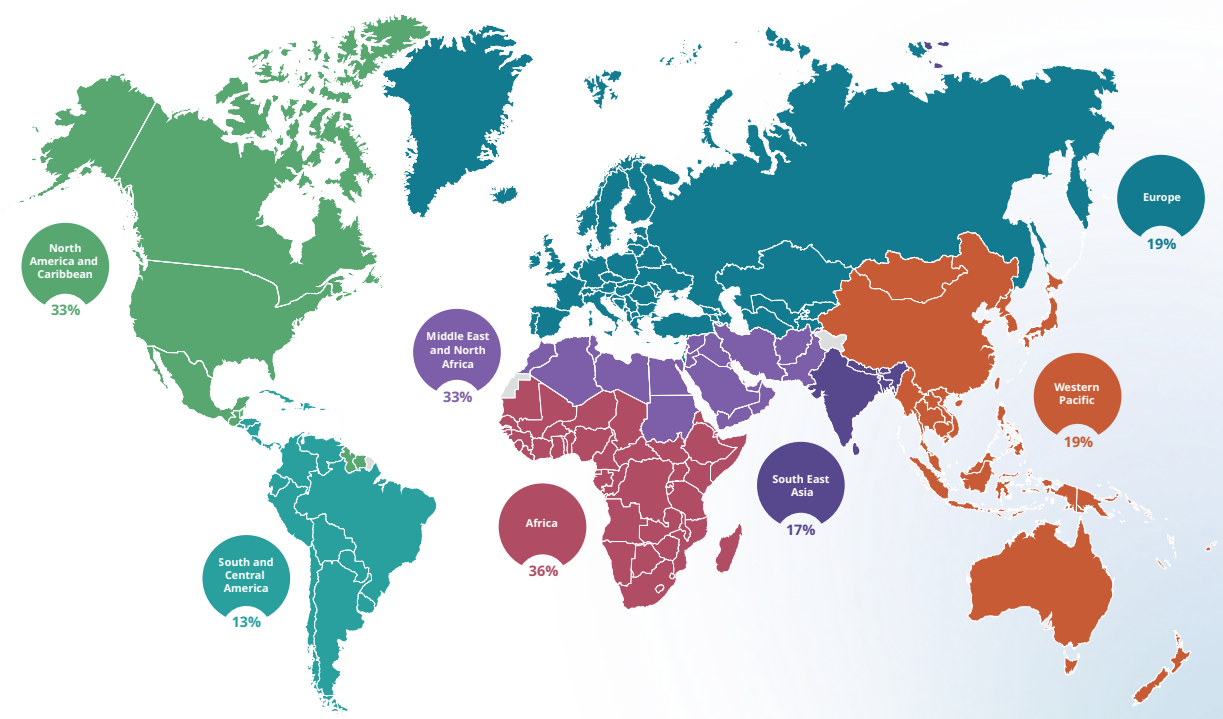




Image courtesy of IDF

The impact of diabetic retinopathy for people with diabetes

DR is a leading cause of moderate to severe VI and blindness, disability, and poor quality of life among people with diabetes worldwide. It affects the majority of people with type 1 diabetes over their lifetime, and over 60% of people living with type 2 diabetes for ten years.⁸ If DR goes untreated or treatment is delayed, it can result in VI or blindness. VI reduces mobility, affects mental wellbeing, and reduces work productivity.⁹ DR is associated with increased mortality and poor mental health.¹⁰

Vision loss is one of the most feared complications for people with diabetes. Additionally, the loss of independence and mobility associated with decreased visual function significantly impacts quality of life and causes emotional distress. People with diabetes report that vision loss due to DR makes everyday activities difficult, such as driving, working and cooking or cleaning their home.¹¹

Furthermore, vision loss due to DR impacts diabetes management, making diabetes care activities increasingly difficult, such as preparing insulin injections and glucose testing, which are predominantly visual tasks. This, in turn, impacts the development of further diabetes complications, resulting in increased costs to the person, health systems and society.

People with advanced DR are likely to experience enhanced social and emotional strain. This can, in turn, affect their ability to continue treatment, worsen diabetes management and increase the risk of vision loss. Ultimately they enter a cycle of further psychosocial stress with implications for disease management, clinical outcomes and healthcare costs.¹²

The treatment for sight-threatening DR is also a very difficult time for people with diabetes. The individualised nature of treatment protocols and the varied responses to the treatment mean that it is often difficult to give the person a definitive length of treatment and what the likely end vision will be. This is very distressing for people who are trying to juggle work or caring responsibilities around treatments.

The impact of diabetes and diabetic retinopathy on healthcare budgets

Approximately 12% of total global health expenditure is spent for diabetes care. However, there are marked differences in expenditure between low- and high- income regions and countries, with North America spending over 30 times more than Africa on diabetes care.⁷ As the need for diabetes-related healthcare continues to escalate, this will directly cause an economic impact on healthcare budgets for individuals and healthcare providers, particularly in low-resource settings. The cost of healthcare for people with diabetes and DR is significantly higher than for those without diabetes.¹³

Moreover, VI is associated with considerable economic costs, including global annual economic productivity loss of US\$ 411 billion in 2020.¹⁴ People with diabetes have substantially higher medical costs if they develop DR, and even higher costs if they progress to severe forms of the condition.

To reduce the impact on healthcare budgets, it is crucial to implement strategies to a) prevent the development of DR and b) prevent the progression to DR-related complications VI.¹⁵



Image courtesy of IDF



Mr Mohan Kumar Dangi

Nepal

I am 65 and have lived with type 2 diabetes for 30 years. My diagnosis came unexpectedly during a check-up for a recurrent genital ulcer. I manage my condition closely and make sure to go to regular follow-up appointments to monitor any changes.

Throughout my diabetes journey, I have developed several complications. One of these is proliferative diabetic retinopathy (DR), the most advanced stage of diabetic retinopathy that affects vision. Following my DR diagnosis, I was also diagnosed with primary open-angle glaucoma (POAG) and now take anti-

glaucoma medication. However, I am fortunate to still have 6/12 vision in both eyes, thanks to laser therapy and anti-VEGF medicine.

Due to another diabetes-related complication, diabetic neuropathy, I have had one leg and two fingers amputated.

These complications have made it difficult for me to perform daily tasks and made me dependent on others. Additionally, I do not have health insurance and pay out of pocket for my eye treatments, which has caused financial difficulties. As a teacher, I have to manage my stress, so it does not affect me psychologically and impair my work. Although I have received good care and support from healthcare professionals, I have never had any psychological support for my condition. I am lucky to have help and support from my family and friends.

I urge the Government to build awareness of diabetes and diabetic retinopathy (DR) and improve access to quality treatment facilities. Providing financial assistance would greatly benefit people living with diabetes and DR, enabling them to receive timely treatment for complications and ultimately enhance their overall quality of life.



Image courtesy of IAPB

Addressing diabetes and diabetic retinopathy

Causes and risk factors of diabetes and diabetic retinopathy

Type 2 diabetes is increasing globally due to demographic factors — population growth and increased life expectancy — and modifications in diet and lifestyle. Type 1 diabetes cannot yet be prevented, but, in some cases, type 2 diabetes can be delayed, prevented or reversed with regular physical activity and a healthy diet. The impact of all types of diabetes, including the development of related complications such as DR, can be reduced with early diagnosis and care.

The leading risk factors for developing DR are high blood glucose, increased duration of diabetes and high blood pressure. There are also genetic risk factors, particularly in relation to type 1 diabetes.¹⁰

People with DR are at increased risk of progressing to vision threatening diabetic retinopathy if they have high blood glucose levels, kidney disease, were diagnosed at a younger age or have high blood lipids.^{16,17}

The need for a multisectoral response to address the causes of diabetes and diabetic retinopathy and prevent related vision loss

A multisectoral response is crucial, not only to address the causes of diabetes and DR, but also to prevent vision loss caused by DR.¹⁸ National strategies for DR must be integrated and aligned with national diabetes programmes. Close collaboration and co-management of people with diabetes involving dietitians, endocrinologists, family medicine specialists, primary eye care providers and ophthalmologists are essential.

Firstly, effective interventions to reduce the incidence of diabetes and DR must be delivered within mainstream diabetes healthcare services. Prevention of type 2 diabetes through lifestyle modifications to ensure physical fitness and prevent excess weight is key to decreasing the prevalence of diabetes and, in turn, its complications, such as DR.¹⁹

Secondly, two key strategies can prevent the development of DR in people with diabetes: improved glycaemic management and regular blood pressure control. Glycaemic and blood pressure management also reduce the risk of DR progression and DR-related vision loss.^{20,21}



Dr Fernando Malerbi

Brazil

As an ophthalmologist, I have treated patients with diabetic retinopathy (DR) for the past 23 years, first as a medical resident in ophthalmology and later as a specialised vitreoretinal surgeon. I have treated patients across the disease spectrum, from asymptomatic to those with severe disease and vision loss, highlighting the importance of preventive measures. It is much easier to prevent than to treat, and undoubtedly, many more people will save their vision through prevention. Currently, the prevalence of DR in Brazil is unknown due to a lack of nationwide studies. Our recent systematic review highlighted this gap in epidemiology, prompting the Brazilian Diabetes Society to undertake a multicenter study to obtain the prevalence rate.

Brazil has the sixth highest number of people with diabetes and faces barriers to accessing quality care, particularly for retinal examinations. These challenges are present in both the public and private sectors and are compounded by limited health education and awareness about diabetic retinopathy.

Government priorities align with the challenges of increasing access to screening, timely treatment and diabetes education for all stakeholders. Brazil's extensive public health system is a major asset, but it needs better organisation for diabetic retinopathy screening and treatment. With increased access lies the priority of raising awareness and educating people with diabetes about the importance of screening for the condition.

Preventive measures can delay the onset of DR in people with diabetes but cannot fully eliminate the risk of developing DR over the lifetime. DR-related VI and blindness can be largely prevented through early detection and subsequent timely treatment.⁵ Diabetes healthcare professionals must educate people with diabetes about eye complications associated with diabetes. As the early stages of DR rarely cause vision loss, regular screening is required to detect the condition early and plan treatment, which is more effective in earlier stages of the disease. Early detection also provides an opportunity to modify known risk factors to prevent the progression of the disease.

All people with diabetes need to be screened yearly or two-yearly even if they do not have any eye symptoms.²² To achieve a high coverage, opportunities should be taken to deliver DR screening within diabetes healthcare services. Advances in digital retinal photography make it possible to screen for DR without the need for eye specialists. Image interpretation can be delivered by trained technicians without an eye health background or be supported by technology that allows remote grading (teleophthalmology). In the last decade, advances in artificial intelligence (AI) have shown promising results in supporting non-specialists to grade the severity of DR. Individuals that are found to have moderate to severe DR need to be referred to eye care services for further management. Strong collaboration between diabetes and eye care services is essential to help people with diabetes navigate the clinical pathway effectively.

Treatment of vision-threatening DR is delivered by eye specialists. Laser therapy is the mainstay treatment for proliferative diabetic retinopathy and can also be used in some cases of diabetic macular oedema and severe NPDR.²³ Anti-VEGF injections (vascular endothelial growth factor) or intravitreal steroids can reduce the progression of the disease and preserve visual function in diabetic macular oedema. Vitrectomy can restore useful vision in eyes with non-resolving vitreous haemorrhage and tractional retinal detachment of the macula if undergone within an appropriate timeframe.

Steps of a multisectoral response to prevent vision loss:

- Promote a multisectoral response to prevent vision loss caused by DR and address the causes of diabetes and DR.
- Ensure effective interventions within diabetes healthcare services to reduce the incidence of diabetes and DR.
- Promote glycaemic management and regular blood pressure control to prevent the development of DR in people with diabetes.
- Implement preventive measures, such as yearly or two-yearly screening, to ensure early detection and timely treatment to delay the onset of DR in people with diabetes.



Diabetes and diabetic retinopathy on the political agenda

In May 1989, a World Health Assembly (WHA) resolution requested WHO to work with the IDF and similar bodies to expand the prevention and control of diabetes.²⁴ Shortly after, the St. Vincent Declaration in Europe, set five-year targets for the care of people with diabetes, including a target to reduce new blindness due to diabetes by one third or more.²⁵ This commitment was renewed ten years later and inspired other regional partnerships such as the Declaration of the Americas on Diabetes in 1996, the Western Pacific Declaration on Diabetes in 2000, and the Declaration and Diabetes Strategy for Sub-Saharan Africa in 2006.

The United Nations General Assembly resolution 70/1 (2015), adopted the 2030 Agenda for Sustainable Development and defined the Sustainable Development Goals, as well as the associated target 3.4 of reducing the risk of premature mortality from diabetes and other major noncommunicable diseases by one third by 2030.

In 2019, the WHA extended the WHO Global action plan for the prevention and control of NCDs 2013–2020 to 2030 and called for the development of an

Implementation Roadmap to support actions towards prevention and management of NCDs, including diabetes.

In April 2021, WHO launched the Global Diabetes Compact, a global initiative aiming for sustained improvements in diabetes prevention and care, with a particular focus on supporting low- and middle-income countries.

The WHO Global Diabetes Compact has the vision of reducing the risk of diabetes and ensuring that all people who are diagnosed with diabetes have access to equitable, comprehensive, affordable, and quality treatment and care. The work undertaken as part of the Compact will also support the prevention of type 2 diabetes from obesity, an unhealthy diet and physical inactivity.

In May 2021, the WHA issued a resolution on reducing the burden of noncommunicable diseases through strengthening prevention and control of diabetes.

In May 2022, the WHA adopted five global diabetes coverage and treatment targets to be achieved by 2030.

The five new targets set the standard that, by 2030:

1. 80% of people living with diabetes are diagnosed.
2. 80% have good control of glycaemia.
3. 80% of people with diagnosed diabetes have good control of blood pressure.
4. 60% of people with diabetes aged 40 years or older receive statins.
5. 100% of people with type 1 diabetes have access to affordable insulin and blood glucose self-monitoring.

As well as the main targets, there are some suggested complementary metrics. Vision threatening DR is highlighted as a priority metric for increased global

surveillance through inclusion in standardised surveys and reporting of country-level estimates.²⁶

IAPB together with the United Nations Friends of Vision successfully advocated for the inclusion of eye health in the [first Political Declaration of the High-level Meeting on Universal Health Coverage](#). This declaration recognises that UHC cannot be achieved without eye health.

The [WHA Resolution on Integrated People Centred Eye Care](#) endorsed this commitment. Requiring all countries to make eye care an integral part of UHC and to integrate people-centred eye care into their national health systems.

Two new ambitious [eye health targets for 2030](#) were adopted by the WHA in 2021. These targets address the two leading causes of blindness and VI, cataract and refractive error. They are a vital mechanism to monitor global progress on eye health and to hold governments accountable. At this meeting several members expressed the need to consider adopting a target for DR and work is ongoing to collate data for an indicator on retina screening coverage for people with diabetes.



Ms Chimezie Anyiam

Nigeria

I was diagnosed with type 2 diabetes in January 2013 when I was 26 and with diabetic retinopathy (DR) seven years later in February 2020. Before my diagnosis, my doctor had explained my risk of developing DR. I didn't receive an official diagnosis. However, I experienced blurred vision and went to the hospital. I learned that my eyesight was affected by my high blood glucose levels due to poor management. I don't recall receiving any information on living with diabetic retinopathy at the time of my diagnosis. However, my life did change. I had regular eye examinations and managed my blood sugar regularly to prevent

my eyesight from worsening. In so far as treatment, I use prescription eye drops, which at times have been challenging to access.

Of course, the diagnosis did affect me mentally. I became stressed and anxious but had no psychological support to help me deal with these feelings. Thankfully, my family and friends have been an enormous support and helped me get through my diagnosis. I didn't find the same level and frequency of support from my healthcare team.

I want my Government to improve the prevention and treatment of type 2 diabetes and diabetic retinopathy and to improve the quality of life of people living with these conditions. Unfortunately, I regret to say I have very little hope that my Government feels concerned enough to address these issues.



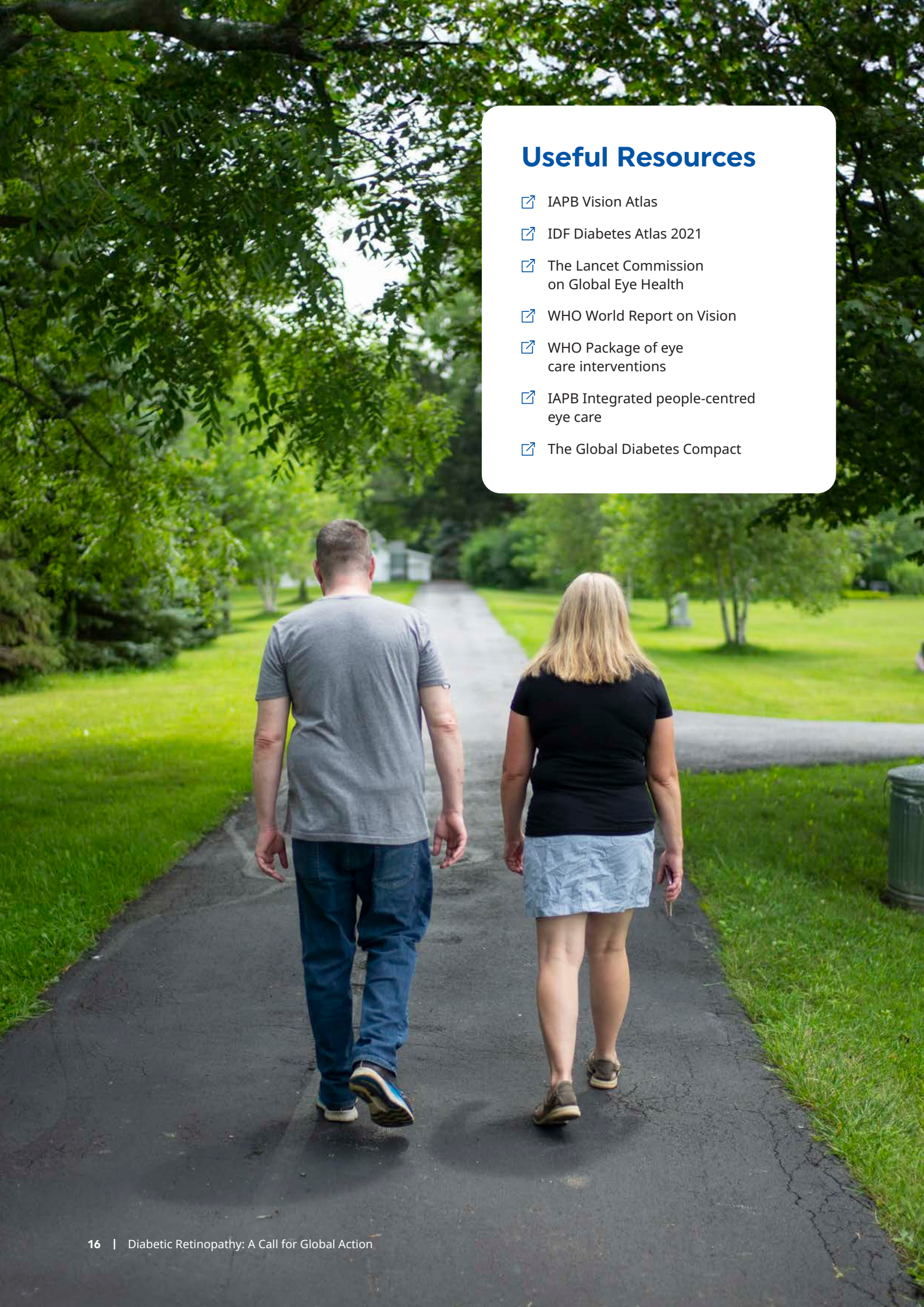
Policy Recommendations

All people with diabetes are at risk of developing DR. There are primary prevention measures that can reduce the risk of developing DR and secondary and tertiary prevention interventions that can reduce the risk of VI and blindness in people with DR.

Primary and secondary prevention of DR must be firmly integrated and delivered as part of diabetes care. In addition, strong referral mechanisms need to exist to connect those that require tertiary prevention interventions which are delivered by eye care services.

We need to take action to address DR as one of the most common diabetes complications that can greatly affect the quality of life of people with diabetes. IDF and IAPB recommendations are to:

1. Promote intersectoral collaboration to integrate DR care into all diabetes policies and national health strategic plans so that people with diabetes receive a continuum of interventions encompassing promotion, prevention and treatment of DR.
2. Strengthen and improve access to diabetes care at all levels, to adapt and respond to the rapidly changing population needs, including the projected growth in the number of people with DR.
3. Develop and implement screening and treatment interventions for DR that are contextually appropriate to the needs of different populations and to the resources available in different countries' healthcare systems.
4. Provide universal health coverage (UHC) for interventions that reduce the risk of VI in people with diabetes, including screening, the treatments and the drugs required to achieve this.
5. Advocate for people-centred diabetes and eye care, so people with diabetes participate in the development of policies that address their DR needs.
6. Promote and fund a global research agenda for diabetes and DR that includes health systems, and technological innovation and research to maximise the impact of the research into practice.
7. Include DR in the global diabetes targets and promote and fund the collection of population level data on DR and DR-related VI.
8. Strengthen national capacity to collect, analyse and use services data on the burden and trends of diabetes, DR and DR-related VI, to monitor and evaluate progress.



Useful Resources

- [IAPB Vision Atlas](#)
- [IDF Diabetes Atlas 2021](#)
- [The Lancet Commission on Global Eye Health](#)
- [WHO World Report on Vision](#)
- [WHO Package of eye care interventions](#)
- [IAPB Integrated people-centred eye care](#)
- [The Global Diabetes Compact](#)



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