Roche

Insights Report:

Vision Care in APAC — Understanding the Societal and Economic Burden

Report endorsed by the International Agency for the Prevention of Blindness, Retina Hong Kong and Retina International

Contents

About this work

This report brings together findings from the *APAC Vision Health Survey*, complemented by insights derived from publicly available research and evidence from leading global health institutions. By integrating real-world experiences with global evidence, this report provides an overview of how an ageing population, rising diabetes prevalence, and limited awareness of retinal conditions in Asia Pacific are shaping the evolving landscape of vision care, revealing emerging opportunities to enhance care delivery in partnership with existing systems.

The *APAC Vision Health Survey* engaged 4,354 individuals aged 40 and above across eight key markets—including Australia, Hong Kong, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand. Conducted online in multiple languages, the survey captured diverse perspectives on everyday challenges and opportunities related to vision care, reflecting both the personal and societal consequences of vision impairment.

Grounded in survey insights and supported by global research, this report serves as an initial step in an ongoing dialogue. We invite healthcare professionals, policymakers, patient groups, and stakeholders across the healthcare ecosystem to join us in exploring collaborative opportunities to strengthen vision care systems and improve patient outcomes for all across the region.

We hope this report inspires thoughtful discussion and drives meaningful initiatives that prioritise patient needs and foster a more inclusive, effective vision care system for all across the Asia Pacific region.

Demographics at a glance:

RESPONDENTS
General public aged 40 and over

TOTAL SAMPLE
4,354 respondents

MARKETS AND SAMPLE SIZES
4,354 individuals aged 40+ across eight APAC markets:

• Australia	502
• Hong Kong	476
• Malaysia	607
• Philippines	478
• Singapore	604
• South Korea	510
• Taiwan	570
• Thailand	607

Frontline perspectives: LEADING EXPERTS ON ADVANCING VISION HEALTH IN APAC

The *APAC Vision Health Survey* sheds light on the complex landscape of vision health across the region. To complement these findings, leading eye care specialists and representatives of patient advocacy groups from across Asia Pacific share their insights based on clinical experience and regional expertise. These healthcare professionals and patient advocates offer perspectives on preventive care, technology integration, ageing populations, and healthcare accessibility – providing context on how survey themes connect to everyday practice and present potential paths forward for vision health in APAC.

CLINICAL EXPERTS

Our recent analysis of AMD screening data reveals patterns that complement the *APAC Vision Health Survey* findings. Many patients diagnosed with age-related macular degeneration (AMD) have limited awareness about their condition's management options, often viewing vision loss as inevitable rather than manageable. Through educational initiatives, we've observed how knowledge empowers patients to better understand AMD as a chronic condition requiring ongoing care. As populations age across APAC, community-based screening approaches and technologies like AI for early detection become increasingly important. By fostering collaboration across healthcare sectors, we can build comprehensive services that help preserve independence and quality of life for older adults, reduce the burden on loved ones, and enable seniors to age with dignity while remaining active contributors to their communities.

DR MÅRTEN E BRELÉN
Associate Professor, Department of Ophthalmology and Visual Sciences
The Chinese University of Hong Kong, Hong Kong

The survey results reflect what we see in clinical practice. There's both an urgent need and a clear opportunity for the healthcare community to develop more effective approaches to eye health. This means raising awareness among the public and high-risk groups about the importance of early screening. It also means integrating vision care into existing healthcare frameworks like diabetes and ageing management and using technology to create more accessible pathways for all patients. By working together across the healthcare ecosystem, we can significantly improve vision health outcomes throughout Asia Pacific.

PROFESSOR ANDREW CHANG
Vitreoretinal Surgeon and Ophthalmologist
Sydney Eye Hospital
Australia

Secretary-General, Asia Pacific Vitreo-retina Society (APVRS)

Frontline perspectives

Innovation and collaboration are essential to transforming vision care in Asia Pacific. By integrating advanced technologies like AI-powered diagnostics and innovative treatments with strong partnerships across healthcare systems, we can enhance early detection, improve treatment outcomes, and make vision care more accessible to communities across the region. Through collective efforts across the healthcare ecosystem, we can break down barriers to care and build a future where preventable vision loss is effectively managed, improving lives and reducing the broader societal impact.

DR KENNETH FONG
Managing Director, Consultant Ophthalmologist and Vitreoretinal Surgeon
OasisEye Specialists
Kuala Lumpur, Malaysia

Expanding access to vision care through technology, such as telehealth and AI, is critical for addressing barriers like geographic isolation and limited availability of specialists. These innovations enable earlier detection of conditions like diabetic retinopathy and age-related macular degeneration (AMD), while enhancing integration with broader healthcare services for more efficient, personalised care. By improving accessibility, supporting patient engagement, and enabling remote monitoring, telehealth and AI are transforming eye care delivery. Preserving sight through these advancements not only improves quality of life but also alleviates the socioeconomic burden of vision loss on communities.

DR PAISAN RUAMVIBOONSUK
Clinical Professor of Ophthalmology,
College of Medicine
Rangsit University, Rajavithi Hospital
Bangkok, Thailand

Ageing populations and rising diabetes rates across APAC present significant challenges for vision health. To address these challenges, integrating regular eye screening into diabetes management is crucial for early detection and intervention. Digital health innovations, particularly AI-assisted diagnostic tools, enhance this integration by transforming our ability to detect sight-threatening conditions earlier and with greater accuracy. To implement these technologies at scale, meaningful public-private partnerships are essential. The economic implications are compelling: investing in preventive vision care delivers substantial returns by preserving sight, maintaining workforce participation, and reducing the growing burden on healthcare systems and families.

ASSOCIATE PROFESSOR GAVIN TAN
Head and Senior Consultant, Surgical Retina Department
Vice Chair, Strategy, Innovation & Organisation Transformation
Singapore National Eye Centre
Singapore

Frontline perspectives

The *APAC Vision Health Survey* offers a timely and comprehensive snapshot of eye care across the world's largest demographic region. It highlights real-world challenges in both preventive and therapeutic care, while outlining practical pathways to improve access and awareness. This is especially meaningful as we strive to expand access to quality eye care for remote and underserved communities. The report serves as a valuable reference for healthcare stakeholders working together to strengthen and scale vision care systems across the region.

DR HARVEY SIY UY
Medical Director
Peregrine Eye and Laser Institute
Makati City, Philippines

The *APAC Vision Health Survey* underscores a significant opportunity: translating high awareness into proactive vision care. Integrating regular fundus examinations into routine diabetes management is crucial for the early detection of conditions such as diabetic macular edema (DME), which can lead to vision loss. With enhanced public awareness, integrated diabetes care pathways, and supportive policies, vision health can become a routine part of overall healthcare, significantly improving lives across APAC.

DR SEUNG-YOUNG YU
Professor of Ophthalmology Department
Kyung Hee University Hospital
Seoul, South Korea

Frontline perspectives

PATIENT ADVOCATES

AVRIL DALY
Chief Executive Officer
Retina International

"The Roche *APAC Vision Health Survey* underscores what Retina International has long championed: vision impairment is not an inevitable consequence of ageing or disease, but a challenge we can overcome through early intervention, innovation, and collaboration. For millions living with retinal conditions, timely access to screening, education, and cutting-edge treatments is essential–not just to preserve sight but to safeguard independence, dignity, and quality of life. We call on policymakers, healthcare systems, and the global community to prioritize equitable access to comprehensive care and foster research that transforms lives. Together, we can create a future where no one is left behind."

DREW KEYS
Director of Policy, Advocacy & Strategy
International Agency for the Prevention of Blindness

"The Roche *APAC Vision Health Survey* sheds critical light on the challenges and opportunities for improving eye health across the Asia-Pacific region. With nearly two-thirds of the world's vision impairment concentrated in this region, it is imperative that we address the gaps in understanding and barriers that prevent people from accessing the care they need. Vision impairment not only affects individuals' quality of life but also has profound societal and economic consequences, impacting productivity and development across communities.

At IAPB, we are committed to ensuring that vision care is recognized as an essential component of universal health coverage and a fundamental health priority. The findings provide valuable insights to guide policymakers, healthcare providers, and advocates in developing targeted, effective solutions to improve eye health outcomes. Together, we can work toward a future where everyone, everywhere has access to quality eye care."

KIN PING TSANG
President
Retina Hong Kong

"Living with retinal conditions demonstrates that vision health is about more than medical treatments–it's about empowering individuals, preserving dignity, and unlocking opportunities for a better quality of life. The Roche *APAC Vision Health Survey's* findings highlight the urgent need for integrated vision care strategies that combine technological innovation, targeted screening programs, and robust community support. At Retina Hong Kong, we envision a future where collaboration among patients, healthcare providers, and policymakers drives transformative solutions to protect and preserve sight for all."

Executive summary

THE HUMAN COST

Asia Pacific stands at a critical juncture in vision health. While the region represents just over half of the global population, it shoulders nearly two-thirds of the world's moderate-to-severe vision impairments.[1] This situation is likely to be further threatened by the demographics of the region, which has one of the fastest ageing populations in the world, coupled with rising diabetes rates, both major risk factors for vision impairment.[2,3,4]

The devastating impact of vision loss extends far beyond the individual, affecting their loved ones and communities, and creating ripple effects throughout society. Ophthalmological disorders are the ninth-most burdensome disease group measured in years lived with disability – ahead of Alzheimer's disease, respiratory disorders or reproductive disorders.[5] Globally, vision impairment leads to an estimated US$411 billion in annual productivity losses.[6,7]

US $411 billion
of global productivity lost due to vision impairment every year [6,7]

90% of vision impairment is preventable or treatable
with appropriate care [8]

91%
of respondents expressed concern about their vision health

only 28%
reported receiving annual or more frequent eye exams[9]

THE NEED TO STRENGTHEN PREVENTION

90% of vision impairment is preventable or treatable with appropriate care.[8] However, the *APAC Vision Health Survey* revealed that although 91% of respondents expressed concern about their vision health, only 28% reported receiving annual eye exams. This stark prevention gap also exists among high-risk groups: less than 60% of those aged 60 and above reported attending regular check-ups as a preventive measure, and nearly one-third of individuals with diabetes do not receive annual eye exams.[9]

The barriers behind this gap are multifaceted, spanning areas of awareness, accessibility, and affordability. For example, roughly 2 in 10 survey respondents reported being unaware of the importance of regular eye exams or seeing no need for them. Additionally, two-thirds of global ophthalmologists are concentrated in just 13 countries, with only three in APAC.[10] This coincides with average wait times for vision appointments in the region of 13.7 days.* Moreover, nearly 40% of respondents cited affordability as a barrier to regular care.[9]

Respondents were asked: "How long did you have to wait for the [eye care] appointment?" Options included: within a day, within a week, within a month, within six months, more than six months, and unsure/prefer not to say. Average wait times were calculated using the midpoint method, and actual wait times may differ.

ADDRESSING THE VISION CARE CRISIS

The ageing population and high prevalence of diabetes in the APAC region highlight a need to strengthen vision care delivery. Building on insights from global health and vision organisations like the World Health Organization (WHO), along with established studies, the following six key areas can help advance awareness, accessibility, and affordability of vision care:

1. **ESTABLISH A COMPREHENSIVE NATIONAL VISION PLAN**
   Integrate eye care into national health strategies and policies, emphasising preventive services.

2. **IMPROVE AWARENESS OF VISION CARE AND EYE DISEASE**
   Increase public health campaigns and improve access to vision care resources to empower all individuals, especially those at high risk, to actively pursue preventive and timely eye care.

3. **INTEGRATE VISION CARE INTO THE HEALTHCARE OF AT-RISK GROUPS**
   Incorporate vision care into health service delivery at all levels, such as diabetes and ageing care, to enhance system efficiency and support higher-risk and underserved communities.

4. **IMPROVE THE VISION CARE WORKFORCE**
   Invest in training and capacity building to develop a skilled and well-distributed eye care workforce.

5. **EMBRACE DIGITAL HEALTH SOLUTIONS**
   Utilise the power of digital solutions, such as telehealth and AI-assisted screening, to address geographical barriers and bridge care gaps.

6. **EXPAND AND ENSURE INVESTMENT TO VISION CARE**
   Recognise the long-term health and economic value of vision care interventions that reduce treatment burdens and enhance patient outcomes.

Chapter 1

THE HUMAN IMPACT AND COST OF VISION IMPAIRMENT IN APAC

Vision is a vital sense that connects us to the world around us. It represents a cornerstone of independence and empowerment; from the freedom to drive, read, work and play, to simply seeing the faces of loved ones. The loss of one's vision can amount to the loss of one or all these things and is often preventable. In fact, 90% of vision impairment cases can be treated or prevented through early detection and appropriate treatment.[8]

The scale of vision impairment in Asia Pacific demands immediate attention. While the region represents 51% of the global population, Asia accounts for approximately two-thirds of all moderate-to-severe vision impairments worldwide. This disparity underscores a critical public health challenge that requires urgent intervention.[1]

Asia accounts for approximately

two-thirds

of all moderate-to-severe vision impairments worldwide[1]

Nearly 7 in 10

respondents anticipated challenges to their ability to carry out daily tasks as a result of vision impairment[9]

In the *APAC Vision Health Survey*, the high human cost of vision impairment was evident in this region. Across 4,354 individuals aged 40+ in eight surveyed markets, 9 in 10 respondents expressed concern about their vision health. They were also worried about how vision impairment would impact their lives, with nearly 7 in 10 anticipating challenges to their ability to carry out daily tasks like cooking and cleaning, and nearly half fearing a decline in their quality of life.

For example, the fear of being unable to complete daily tasks was most prominent in Hong Kong, with nearly 8 in 10 respondents expressing this fear. On the other hand, South Koreans were most preoccupied with a decline in quality of life, with more than 7 in 10 respondents reporting this concern.[9]

Chapter 1 - The human impact and cost of vision impairment in APAC

Respondents also noted the strong economic consequences of vision impairment, roughly 41% reported that it would impact their financial health and 46% believed it would limit their ability to maintain employment. Concerns about working were most prominent among Singaporean respondents, where 52% reported concern about vision impairment's effect on keeping their job.

Beyond these, respondents highlighted independence, mobility, reading and using digital devices, social connections, and mental health impacts as key areas where they anticipated challenges due to vision loss. For instance, Australian respondents were the most concerned about loss of mobility, with more than 6 in 10 citing it as a concern associated with vision loss.

This individual impact is substantial, but people do not suffer vision loss in a vacuum. The impact of vision impairment on one person touches their loved ones, their communities, and ripples out into society. 1 in 5 people with vision loss expressed apprehension about the pressure their condition places on their families. In fact, caregivers of individuals with vision loss reported great amounts of stress in the APAC region, with 95% reporting significant challenges and nearly 40% experiencing financial strain because of their caregiving activities.[9]

By 2050, 1 in 4

people in APAC will be 60+ years old, driving increased vision health needs[1]

According to the International Association for the Prevention of Blindness and The Lancet, the wider economic implications of vision impairment include decreased productivity, absenteeism, job losses, as well as a host of financial, social, and psychological issues that make life and work more difficult.[6 11] In addition, vision impairments are the ninth-most burdensome disease group if measured in years lived with disability – ahead of Alzheimer's, respiratory disorders or reproductive disorders.[5] For example, in 2020, the estimated global annual economic productivity loss associated with vision impairment was approximately US$ 411 billion.[6]

95%

OF CAREGIVERS REPORTED SIGNIFICANT CHALLENGES[9]

- 39% felt a financial burden
- 38% suffered from emotional distress
- 37% experienced exhaustion
- 32% struggled to manage caregiving among other duties
- 32% felt physical strain as a result of caregiving
- 26% reported income loss
- 25% reported productivity loss

Chapter 1 - The human impact and cost of vision impairment in APAC

Based on a recent study on 10 countries, from 2017-2023, diabetic macular edema (DME) and age-related macular degeneration (AMD) resulted in 8 million disability-adjusted life years (DALYs) lost – meaning 8 million years of collective loss of productivity/work capability taken from those societies. This lost productivity cost society US$356 billion, resources that could have strengthened healthcare systems and communities. Looking ahead, the WifOR Institute projects these conditions will claim 13 million healthy life years and US$715 billion in productivity losses between 2024-2032.[12 13]

Given that nearly two-thirds of individuals experiencing moderate-to-severe vision impairments live in APAC, the region bears a significant portion of these burdens.[1]

The burden of DME and AMD[12 13]

8 million
life years (DALYs) lost across 10 countries (2017-2023)

13 million
more healthy life years projected to be lost in these countries (2024-2032)

US$356 billion
productivity losses across these 10 countries (2017-2023)

US$715 billion
additional productivity losses projected for these countries (2024-2032)

Note: This study was commissioned by Roche. The data in this study is a globally representative sample of 10 countries, including: Brazil, Canada, China, France, Germany, Italy, Japan, Spain, the United Kingdom, and the United States.

KEY CONSIDERATIONS

In the vast and diverse APAC region, understanding the challenges and barriers hindering optimal vision care is the first step of the journey towards better eye health. All stakeholders need to critically assess where the unmet needs are, where we fall short, and where we can do more together. Collective opportunities and efforts can be made to enable individuals across the region to lead fuller and more productive lives, and societies can prosper because of it.

The combined economic and social burden of vision impairment in APAC demands a broader perspective: vision care is not just a health investment, but an economic and societal imperative.

Chapter 2
GAPS IN PREVENTION

PREVENTION PARADOX

Eyesight plays a critical role in our lives, yet preventive eye care is often neglected by many. As part of the preventive effort, the American Academy of Ophthalmology recommends that individuals from age 40-54 attend regular eye exams at least every two to four years and 55+ attend at least every one to three years.[14]

However, studies revealed that, in general, many individuals underestimated the importance of routine eye exams. In a 2018 US survey by VSP Vision Care and YouGov, just over half of the respondents reported attending annual eye checkups and only 1% of respondents knew that signs of serious medical conditions can be detected through an eye exam.[15]

According to the *APAC Vision Health Survey*, 91% of respondents expressed concern for their eye health. However, around 1 in 9 adults over the age of 40 reported never having visited an eye care professional. The remaining respondents reported varying levels of engagement, from more than twice a year to only when symptoms arise. For example, 1 in 3 only go when symptoms appear, and just 28% reported visiting annually or more frequently.[9]

91% expressed concern about eye health, but[9]

reported attending annual or more frequent eye check-ups

1 in 3

would only seek care when symptoms appear

1 in 9

adults over 40 have never visited an eye care professional

AGEING FACTOR

While eye conditions affect people of all ages, older people are at a higher risk of vision loss caused by conditions like age-related macular degeneration (AMD).[16] In fact, 200 million people worldwide are estimated to have AMD, and by 2040, this number is projected to rise to close to 300 million.[17] Additionally, many eye diseases that develop with age are impossible for individuals to detect on their own without proper vision screening, such as a dilated eye exam.[18] Compounding this, as people get older, those who suffer from vision loss face an increasing overall burden from it.[11]

Less than 6 in 10

individuals aged 60+ reported attending regular eye checks as a preventive measure

Chapter 2 - Gaps in prevention

Therefore, for older adults, consistent vision care, such as regular eye exams, is particularly vital to mitigate their risk of vision loss.[16] This is even more important in Asia Pacific, as the region is ageing more rapidly than in many parts of the world.[19 1] By 2050, it is predicted that one quarter of people in the region will be 60 years old or older and one fifth of all people will be 80 years old or older.[20]

However, proactive measures to preserve eye health in the elderly often fall by the wayside. In the *APAC Vision Health Survey*, less than 6 in 10 respondents aged 60 and above reported attending regular eye check-ups as a preventive measure to avoid vision impairment.[9]

APAC's ageing vision crisis

Vision loss risk increases with age and by 2050 it is projected that:[20]

- **¼** of the population will be 60+ years old
- **⅕** will be 80+ years old

In 2023 alone, patients 60+ years old treated for nAMD and DME in 10 major countries accounted for **US$39 million** of economic growth.[12 13]

DIABETES AND VISION

Another high-risk group that cannot be overlooked is people living with diabetes.[21] Asia has both high rates of diabetes and a high disease burden with increasing rates across the continent. In 2021, it was estimated that the Western Pacific region had 206 million people with diabetes living in it, the most of any geographic region.[3 22] The risk of blindness is 25 times higher in people with diabetes.[23 24 25] This includes an increased risk of developing serious eye conditions, including diabetic retinopathy, which is a leading cause of blindness among working-age adults.[26]

An annual eye exam is one of the best ways to prevent vision loss and blindness for individuals with diabetes. Additionally, such exams are a powerful way to determine if blood glucose levels are impacting eye health, because a patient may not detect those symptoms without having their vision examined.[27]

Improving preventive vision care among this group is particularly critical for the region. Asian people are at a higher risk of developing diabetes, even when controlling the factors of body mass index (BMI) and waist circumference.[28 29 30] Further, this heightened risk of diabetes is accompanied by a high rate of diabetes induced complications, including vision loss.[31 32 33]

Even though it is encouraging that the APAC region has a high awareness of the connection between diabetes and vision health, with nearly 90% of those surveyed recognising this link, the survey found general neglect of preventive eye care extends to this high-risk group as well.[9 34] Close to a third of respondents living with diabetes do not meet the yearly eye exam guideline and roughly 1 in 10 people living with diabetes have never gone for eye exams.[9]

This inaction is accompanied with a concerning outcome. According to the survey findings, nearly two-thirds of people living with diabetes in the region experienced vision symptoms that impact their productivity, independence, and quality of life.[9 33] In particular, female respondents living with diabetes were three times more likely than male respondents to report severe impact due to diabetes-related vision impairment.[9]

RISK OF BLINDNESS IS
25x
HIGHER IN PEOPLE LIVING WITH DIABETES[23 24 25]

Chapter 2 - Gaps in prevention

LOW AWARENESS OF RETINAL DISEASE

When it comes to specific diseases, such as age-related macular degeneration (AMD), wet age-related macular degeneration (wet AMD), diabetic macular edema (DME), retinal vein occlusion (RVO), the level of knowledge is generally low. A lack of knowledge of retinal disease and their symptoms can contribute to patients living without a diagnosis, in some cases allowing the diseases to progress.[26] For instance, a German study of elderly patients with AMD found that over 80% of participants who had the condition did not know it was a chronic one.[35]

This phenomenon is also prevalent in APAC. According to the *APAC Vision Health Survey*, all surveyed markets had low knowledge about all these specific retinal diseases across the region, with most respondents having never heard of the conditions or having heard of them, but lacking familiarity with the details of the conditions. In fact, for all four retinal diseases the average familiarity was below 2.2 out of 4, meaning respondents may have heard of the conditions but knew little or nothing about them.[9]

Knowledge gaps

Awareness of retinal disease was low across APAC with a high percentage of respondents having said they are not at all familiar with the following retinal diseases:[9]

59%
Retinal Vein Occlusion (RVO)

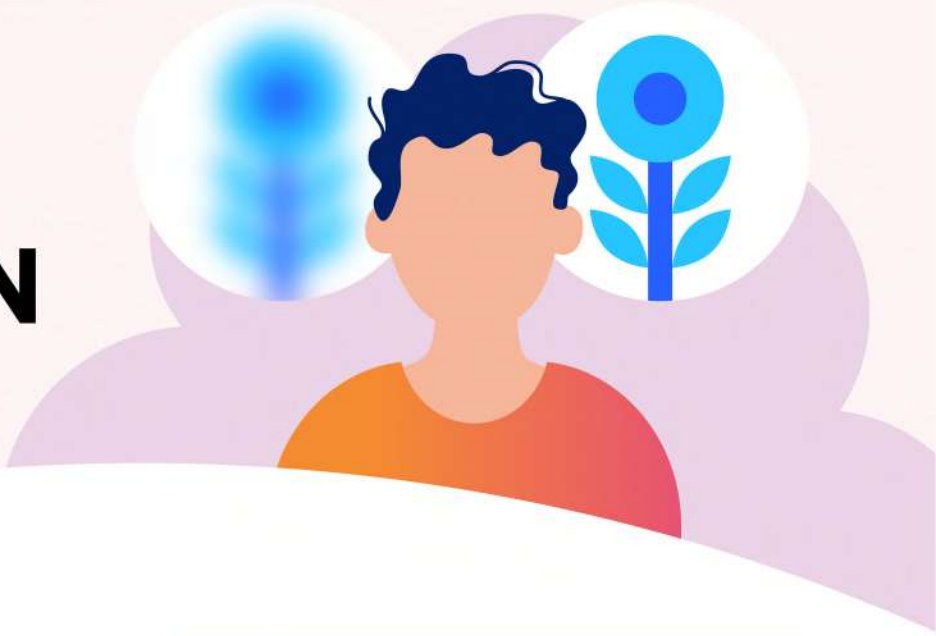
42%
Diabetic Macular Edema (DME)

29%
Age-related Macular Degeneration (AMD)

KEY CONSIDERATIONS

There is a stark disconnect between prevention potential and reality: 90% of vision impairment is treatable or preventable, yet preventive care has low uptake.[8,9] This gap represents a significant need for intervention to stop unnecessary vision loss. Survey findings reveal this gap affects both general populations and high-risk groups. Understanding and addressing these barriers through innovative approaches could transform vision health outcomes across communities and alleviate the substantial burden to individuals and societies.

Chapter 3
BARRIERS TO ACTION



AWARENESS

Two of the key factors influencing the inadequate uptake of preventive eye care are a lack of health literacy and cultural awareness of the importance of eye exams.[19] Additionally, limited knowledge about eye conditions and their treatments may also contribute to low proactive management rates.[36]

For example, studies have found that many people with diabetes are unaware of the importance of preventive care to avoid certain eye diseases.[37,38] In the *APAC Vision Health Survey*, when participants with diabetes were asked about their perceived barriers to attending regular eye exams, roughly 2 in 10 cited a lack of awareness of the importance of eye exams and had no perceived need for eye exams. This is compounded by an additional 2 in 10 who cited fear or anxiety about attending eye exams.

Another representation of the awareness barrier is the widespread acceptance of vision loss as part of the ageing process amongst older adults. Nearly 1 in 10 participants in the survey believed that visual impairment is an inevitable and unmanageable part of ageing, and concerningly, older individuals were more likely than younger respondents to be "not concerned at all" about their eye health.[9]

20%

of respondents with diabetes cited a lack of awareness of exams as a barrier to eye checks[9]

2/3

of global ophthalmologists are concentrated in just 13 countries, with only 3 of those countries in Asia Pacific[10]

ACCESSIBILITY

Access to vision care proves to be one of the most important determinants of public vision health, yet such care is not available for many in the APAC.[39] There is a shortage of eye care professionals and facilities in the region.[40,41] For instance, in 2015 it was estimated that two-thirds of the global ophthalmologist population were located in 13 countries, with only three of those countries located in APAC.[10] Southeast Asia in particular suffers from a severe shortage of eye care professionals.[42]

In fact, difficulty booking and attending clinic visits and complex procedures have been identified as barriers for people seeking vision care, especially for rural patients or those of lower socio-economic status.[43] The difficulty in accessing eye care was echoed by *APAC Vision Health Survey* respondents, with an average wait time of nearly two weeks for an eye appointment across APAC.[9]

Respondents were asked: "How long did you have to wait for the [eye care] appointment?" Options included: within a day, within a week, within a month, within six months, more than six months, and unsure/prefer not to say. Average wait times were calculated using the midpoint method, and actual wait times may differ.

Chapter 3 - Barriers to action

Studies have revealed that this challenge is more prevalent among women in some markets, particularly in rural areas. Women in less developed regions often face more difficulties in accessing eye care services due to a combination of economic and cultural factors. Barriers to travel, limited financial decision-making power, and sociocultural obstacles all hinder women from receiving necessary eye care. Similar disparities can also be seen in people who have disabilities.[16]

Additionally, health systems typically have standalone eye programmes focussed on acute symptomatic care, especially in developing economies, rather than investing in preventive care.[44]

AFFORDABILITY

The affordability of vision care is also a major aspect of whether a health system can effectively deliver eye care to its population.[40] This was echoed by *APAC Vision Health Survey* respondents when people with diabetes were asked about their barriers to vision care. The primary obstacle they encountered was the out-of-pocket cost of care, with nearly 4 in 10 facing difficulty obtaining regular vision care due to financial constraints.[9]

Survey data also indicated that cost was a more significant barrier to care in Philippines, Malaysia, Taiwan, and Thailand than in other surveyed markets.[9] It is also important to note that affordability is a more significant barrier for certain socioeconomic groups, such as aged individuals.[45]

The financial pressure extends beyond direct affordability of care. The economic pressures on caregivers present yet another barrier to people with vision impairment receiving the care that they need. For example, in the *APAC Vision Health Survey*, caregivers noted significant financial burden due to vision loss and their caregiving responsibilities. More specifically, 2 in 5 caregivers surveyed experienced financial burdens because of their caregiving, 1 in 4 suffered income loss, and a further 1 in 4 expressed difficulty taking time off work. The survey also found that women were 13% more likely than men to have difficulty balancing caregiving with other responsibilities.[9]

KEY CONSIDERATIONS

These multifaceted challenges present opportunities to enhance vision care delivery at multiple levels. Strengthening healthcare workforces, supporting diverse community needs, and embracing innovations that improve quality and efficiency can help create more inclusive and effective vision care systems.

Chapter 4
CALL TO ACTION

APAC's rapidly ageing population and rising diabetes prevalence create an urgent need to strengthen vision care systems. Survey findings reveal significant gaps in care delivery that affect individuals, families, and societies across the region. Global health organisations, including WHO, emphasise that immediate action is needed at every level regardless of healthcare system maturity – and requires collaborative effort from all stakeholders.

Based on recommendations from WHO and other established sources, six key areas have been identified for implementation. These span from incorporating vision care into national health plans to embracing innovative solutions that enhance care delivery. The following section explores how co-ordinated actions across the healthcare ecosystem can help address these challenges.

1. ESTABLISH A COMPREHENSIVE NATIONAL VISION PLAN

The complexity of barriers to vision care requires high-level leadership, commitment and coordination above technical fixes on individual barriers. In response to this, WHO recommends including eye care in national health plans and essential packages of care as an important step in every jurisdiction's journey to understand and address the locally and regionally specific challenges they face in vision health. These plans should include comprehensive objectives throughout health systems and provide details in actions, output and accountability. National and regional vision health registries systems can also enhance evidence-based policymaking.[16]

2. IMPROVE AWARENESS OF VISION CARE AND EYE DISEASE

Studies demonstrate that effective engagement with the population about the symptoms, prevention, and treatment of eye disease, promotes health-seeking behaviours and increased chance of testing and early diagnosis of vision impairment.[46,47] Public health campaigns play a crucial role in raising awareness by meaningfully encouraging both general populations and high risk groups, such as people living with diabetes and older adults, to improve their uptake of vision services.[48,49] To ensure these efforts are impactful, each health system needs to consider the level of vision health literacy of their population, the availability of vision care resources, and the most pressing vision care challenges specific to their communities.[41]

3. INTEGRATE VISION CARE INTO THE HEALTHCARE OF AT-RISK GROUPS

WHO recommends that vision care be integrated into health service delivery at all levels, primary, secondary, and tertiary care, and that services be coordinated across sectors. For example, vision check-ups could be included in national health screening programmes, and vision care can be integrated into diabetes management and healthy ageing policies, complemented by targeted education and support programmes – this could help improve awareness, confidence, and access to eye care. This can also be applied to communities that face higher risk as a result of a greater difficulty in accessing care, such as rural-remote communities. Additionally, this approach also has the potential to enhance both the efficiency and effectiveness of wider health systems.[16]

Chapter 4 - Call to action

4. IMPROVE THE VISION CARE WORKFORCE

Health systems in APAC face significant challenges in meeting the growing demand for vision care amid a rapidly ageing population. While medical advancements and innovative treatments are important, ensuring that the eye care workforce has the capacity, training, and coordination to effectively serve the community is critical. It is essential to develop a pipeline of well-trained eye care professionals dedicated to timely, high-quality service delivery.

WHO recognises that health workforce policies tailored to community needs can help address shortages and maldistribution for all patient communities.[16] For example, actively encouraging more people to enter the vision workforce, including women, can help mitigate shortages while fostering more diverse healthcare systems, considering the needs of all patients.[50] Additionally, leveraging public-private partnerships to optimise workforce resources and care delivery infrastructure can further enhance

5. EMBRACE DIGITAL HEALTH SOLUTIONS

Digital solutions offer exciting possibilities for expanding access to vision care. Healthcare systems may consider embracing technological solutions to expand access to care and improve efficiency. From telehealth platforms that reach remote communities, to AI-powered screening tools that support early detection and integrated digital health for patient engagement, technology can help bridge critical gaps in care delivery. These innovations, when thoughtfully implemented, can complement existing healthcare services while improving efficiency and access.

6. EXPAND AND ENSURE INVESTMENT TO VISION CARE

Expanding access to vision care services enables better health outcomes, from basic to advanced care levels.[51] Financial risk protection is especially important for low-income and disadvantaged populations.[16] Innovative medicines and technologies that require less frequent clinic visits can reduce treatment complexity while improving outcomes. This is particularly valuable for rural communities and others who face significant travel challenges, easing the burden on patients, caregivers, and healthcare systems.

The value of innovative treatments extends beyond clinical outcomes. They can also generate significant social and economic benefits, including those beyond patient outcomes, reduced strain on healthcare systems, and increased productivity. The recent WifOR study across 10 major countries shows the transformative value of innovative AMD and DME treatments. In just seven years (2017-2023), these innovative treatments contributed a cumulative 1,500 quality-adjusted life years (QALY) and US$173 million to economic growth. The same study found that, in 2023 alone, treatment of those aged 60+ generated US$39 million in economic value. As access to treatment increases, roughly 64,000 QALYs and US$6.3 billion more is expected for 2024-2032.[12,13]

Strengthening vision care systems is both a health and economic priority. Preventing vision impairment helps reduce financial strain on individuals and families, supports workforce participation, and contributes to stronger communities. A coordinated, tailored approach is needed to meet the specific needs of communities on the ground. Greater awareness, strong policy frameworks, sustained investment, and meaningful collaboration across governments and healthcare providers are key to ensuring that vision care remains a priority in national and regional health agendas.

Appendix

The *APAC Vision Health Survey* explores unmet needs in eye health and the impact of vision impairment across the region. It targeted individuals aged 40+ to understand their perceptions of vision health, its relationship with ageing and diabetes, and their awareness of retinal diseases and general eye care.

Conducted by GWI on behalf of Roche, the online survey gathered responses from 4,354 adults aged 40 and above across eight APAC markets: Australia (502), Hong Kong (476), Malaysia (607), Philippines (478), Singapore (604), South Korea (510), Taiwan (570), and Thailand (607). It ran between 27 August and 2 September 2024 and was available in English, Korean, Malay, Tagalog, Thai, and Traditional Chinese.

The questionnaire used multiple-choice questions to capture self-reported perceptions and behaviours related to vision health and healthcare. As with all survey-based research, responses may reflect common biases such as recall bias or social desirability bias. Overall sample sizes per market are statistically sufficient, though caution is advised when interpreting smaller sub-groups. While this report presents regional trends based on aggregated APAC data, market-level variation exists and findings should be interpreted with consideration of local health system contexts. Additionally, in calculating certain averages, a midpoint estimation method was applied for some questions. Although this provides a reasonable approximation, it may not fully reflect the distribution of responses in all cases.

The findings offer meaningful directional insights into public attitudes and behaviours around vision health in APAC and are intended to complement existing evidence. Supported by well-established data on the socio-economic burden of vision loss, the survey highlights areas where policy, education, and access to care can be strengthened, alongside other established sources.

The survey also lays the groundwork for future research into the economic value of innovation, the cost-effectiveness of care models, and the role of digital health in expanding access to eye care.

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