



**Inclusive  
Eye Health  
Report  
2020**



**Title page:** Malawi: Ezimala, 70 years old, was identified and referred for cataract-surgery by the CBM partner Macoha (Malawian Council for the Handicapped) and operated in the CBM supported Nkhoma Eye Clinic.  
**This page:** Cataract surgery in a CBM supported project in India in 1975.

# 1908: Ernst Jakob Christoffel

## One person, one project, one country



CBM's history dates back to 1908. Ernst Jakob Christoffel (1876–1955), a German pastor, founded a home for blind and otherwise disabled and orphaned children in Malatia (Turkey) with the support of a handful of friends in Germany, Austria and Switzerland. Christoffel's work was disrupted by the outbreak of the First World War when he, as a German, was expelled from Turkey. In 1924, the ban was lifted and Christoffel set out for Turkey again but the house in Malatia was lost and attempts to start afresh in Constantinople (later Istanbul) were obstructed by the authorities.

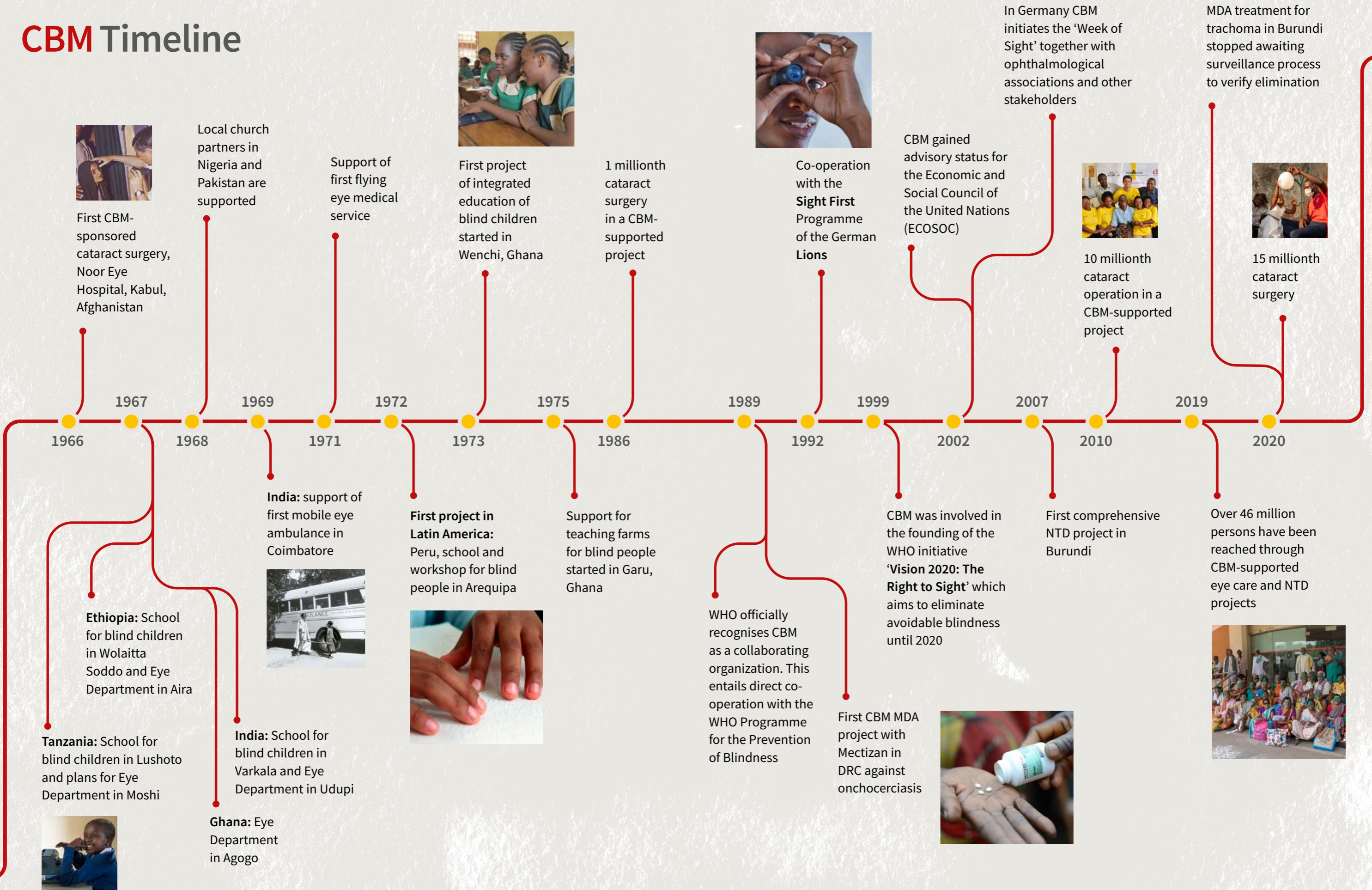
Not giving up hope, Christoffel moved to Iran where, in 1925 and 1928, he set up two homes for blind and otherwise disabled young people in Tabriz and Isfahan. After several fruitful years, the Second World War destroyed everything, and the threat of deportation was imminent. He refused to leave his protégés on their own and was arrested by the allies in 1943. After spending three years in different camps, the last being in Germany, he was released in 1946.

In 1951, as soon as he had access, Christoffel returned to Isfahan. Even though he was 70 years of age and ailing, he went on helping the disabled, poor and abandoned in the name of Jesus Christ. Pastor Christoffel died in 1955 aged 78. His tombstone in Isfahan names him the 'father of the blind, deaf-mute, physically disabled and orphans'.

After his death, the number of supporters diminished, but those remaining were determined to continue his work. In 1961, a young couple – Siegfried and Magdalena Wiesinger – took over the leadership and transformed CBM into an international organization, branching out geographically and in its fields of service. Its eye health work started in Afghanistan and Iran in 1963. In 1967, CBM's approach changed to supporting local churches as project partners offering eye health work, training of medical staff and schools for the blind. Since then, CBM has worked with local partners, such as churches, NGOs and governments, in Asia, Africa, and Latin America to build an inclusive society and reduce the burden of avoidable blindness.

● 1908: Ernst Jakob Christoffel

# CBM Timeline



## ● 2020: CBM Inclusive Eye Health Initiative

**106 partners, 124 projects, 35 countries**



Since 1908, CBM's work has progressed immensely – not only in the numbers of partners, projects, and countries where we support inclusive eye care and Neglected Tropical Disease (NTD) work, but also in terms of how the work is done: how surgery, planning and partnerships have improved.

In the early days of cataract surgery, opacified lenses were removed complete with their capsule. This left patients in need of thick eyeglasses – and even with these, patients would have poor vision. Today, the standard surgical practices used in CBM-supported projects ensure good visual outcomes, as explained later in this report. Although it started by setting up its own projects, CBM's approach now is to support local organisations to implement eye care or to partner with governments and other stakeholders with the aim to strengthening the existing health system.

From a small group of friends in Germany, Austria and Switzerland, CBM has grown into an international organisation that actively works in partnerships at the country, regional and global level. This has been possible with the support of countless persons who believe in its work, from organisations that entrust us with their funds to governments who recognize the need for eye care within their countries.

With all this in mind, it is people in need of eye care and/or rehabilitation that ultimately matter. All persons! Including people with disabilities and other marginalised and socially excluded people, such as those that live miles away from hospitals and rehabilitation services.

The 2019 World Report on Vision shows that at least 2.2 billion people globally have a vision impairment or blindness. Of these, at least 1 billion, mainly living in low- and middle-income regions, have a vision impairment that could have been prevented, corrected or cured. Leading causes are unaddressed refractive errors and cataract. And while further precautionary measures are required with COVID-19, the solutions are there – but a lot is still to do.

In the year 2020, we have recognized that eye care is a major problem which can be solved and in partnership with the eye health community, we now have the knowledge and the resources to face the upcoming challenges. Now should be the era of scale for all of us and CBM looks forward to going to scale in the next decade.

**Dr M. Babar Qureshi**

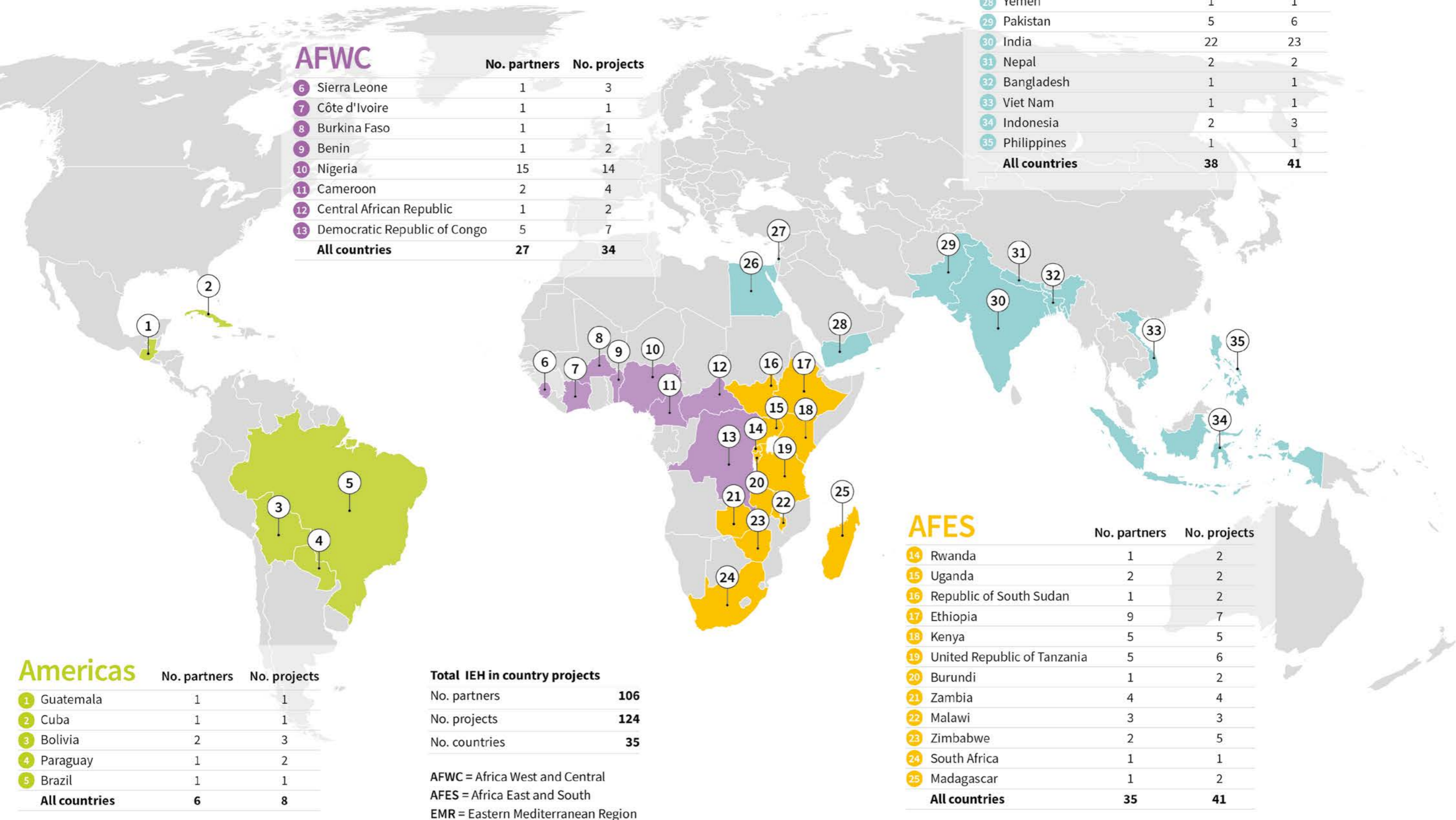
Director Inclusive Eye Health and Neglected Tropical Diseases



Mengo Hospital Eye Unit, Kampala (Uganda): Dr. Lisbon Aliraki and his team operate on a young boy diagnosed with bilateral cataract.

# CBM Inclusive Eye Health

Countries, partners, and projects





## Vision 2020: The Right to Sight – Success or Failure?

Vision 2020: The Right to Sight – the global initiative for the elimination of avoidable blindness – was launched in 1999. It is an initiative from WHO and the International Agency for the Prevention of Blindness (IAPB) together with an international group of non-governmental organisations (NGOs), such as CBM. Its objective was to intensify and accelerate activities for the prevention of blindness with the goal of eliminating avoidable blindness by 2020.

Now, in 2020, the question is: ‘Has Vision 2020 been a success?’ CBM’s answer is a definite ‘Yes!’ At first sight this answer may not seem logical, since absolute figures for blindness reveal that there are more people with blindness in 2020 than in 1999 (see graphic below). So why does CBM believe that this initiative has been a success?

Vision 2020 and subsequent World Health Assembly resolutions had a tremendous impact on collaborations between governments, NGOs and civil societies worldwide. They resulted not only in increasing evidence of the magnitude and causes of visual impairment and the development of eye care services, but also in governments taking increasing responsibility for eye care in their respective countries creating national eye health strategies and setting up national eye health committees.

There has been considerable success in addressing the primary causes of avoidable blindness – namely cataracts, vitamin A deficiency,

onchocerciasis (river blindness) and trachoma. Furthermore, an increasing number of scientific and technological advances – from advances in surgical techniques to telehealth solutions and artificial intelligence – have changed the way in which eye care is addressed nowadays.

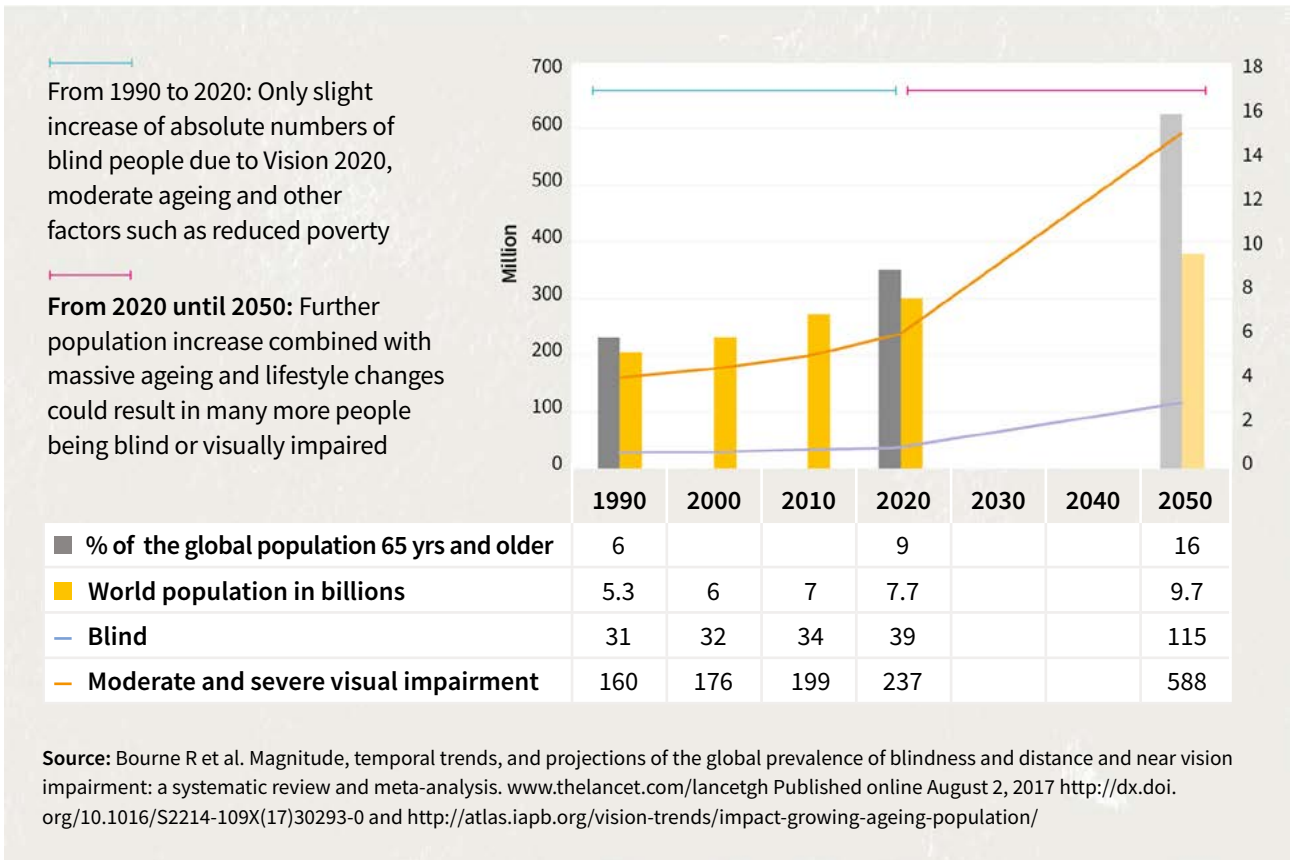
Globally, these efforts have produced impressive results. A recent meta-analysis of population-based studies reported a reduction in the age-standardised prevalence of distance vision impairment and blindness among the adult population from 4.58% in 1990 to 3.38% in 2015.<sup>1</sup>

It is, however, important to realize that these reductions in prevalence are not keeping pace with population ageing and growth. In addition, the prevalence of eye conditions such as diabetic retinopathy and age-related macular degeneration are increasing in CBM partner countries. This explains why the number of persons affected by vision impairment has been, and still is, increasing; however, without Vision 2020, the numbers would have been much greater.


**The objective was to intensify and accelerate activities for the prevention of blindness with the goal of eliminating avoidable blindness by 2020.**

1. Rupert R A Bourne\*, Seth R Flaxman\*, Tasanee Braithwaite, Maria V Cicinelli, Aditi Das, Jost B Jonas, Jill Keeffe, John H Kempen, Janet Leasher, Hans Limburg, Kovin Naidoo, Konrad Pesudovs, Serge Resnikoff, Alex Silvester, Gretchen A Stevens, Nina Tahhan, Tien Y Wong, Hugh R Taylor, on behalf of the Vision Loss Expert Group, ‘Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis’, [www.thelancet.com/lancetgh](http://www.thelancet.com/lancetgh), Vol 5 September 2017, e888-97







**CBM statistics 1999–2019: Data from CBM supported partners**




Over **14 million** pairs of spectacles dispensed




Over **11 million** cataract operations performed



Over **220,000** trichomatous trichiasis (TT) surgeries performed



Over **243 million** doses of antibiotics (Mectizan®) distributed to fight onchocerciasis



Over **43 million** doses of antibiotics (Zitromax®) distributed to fight trachoma

# IEH Initiative Plan 2017-2024: A Strategy to Improve Eye Care

2017 saw the launch of the inclusive eye health (IEH) initiative plan, which contributes to CBM's strategic goal of bringing transformative change to the lives and communities of persons with disabilities living in poverty.

The plan sets out the future direction of all programme work within IEH and neglected tropical diseases (NTDs), identifying strategic priorities and objectives for the initiative, and defining key activities and approaches. It includes NTDs because most of CBM's NTD work is related to NTDs that affect the eyes (trachoma and onchocerciasis).

The plan aligns with the frameworks of the WHO Vision 2020 Strategy, the Global Action Plan 2014–2019 'Towards Universal Eye Health'<sup>2</sup>, the UN Convention on the Rights of Persons with Disability<sup>3</sup>, Agenda 2030 with its Sustainable Development Goals (SDGs), the WHO World Report on Vision and the WHO Roadmap for NTDs<sup>4</sup>.

## The IEH Initiative plan covers three priority areas:

### I. Strengthening national eye health systems

While the IEH Initiative plan aims to support partners in the implementation of inclusive and comprehensive eye health services, it is through integration into national health systems that these services will become sustainable, fully locally owned, and delivered to contextualised quality standards.

### II. Improved access to inclusive, comprehensive eye care services

This area includes multi-pronged interventions to prevent and treat avoidable blindness and to improve the quality of life for people with permanent visual impairment. CBM's target groups are often socially excluded as well as lacking in access to educational,

economic and social opportunities. We will focus resources on partners that are fully committed to delivering inclusive and comprehensive services to communities most in need. We recognise that this will require a phased approach.

### III. Neglected tropical diseases (NTDs)

By focusing on the poorest and most NTD-endemic communities, and by strengthening integration with national systems, we will significantly expand access to preventative and curative NTD services, with mass drug administration (MDA) for trachoma and onchocerciasis. For trachoma, we will lobby to ensure WASH (water, sanitation and hygiene) activities are implemented for the full SAFE strategy<sup>5</sup>. In areas where onchocerciasis and lymphatic filariasis are prevalent, both diseases will be targeted and where countries require us, we also do soil transmitted helminths and schistosomiasis.

NTD programmes will develop referral networks for rehabilitation, counselling and mainstream education and livelihood opportunities ('Disease Management and Disability Inclusion' programmes). NTD programmes administered through partners will be maintained in some form even during instability and conflict.



Please refer to the **CBM NTD 2020 report** ([https://www.cbm.org/fileadmin/user\\_upload/CBM\\_NTD\\_Report\\_2020.pdf](https://www.cbm.org/fileadmin/user_upload/CBM_NTD_Report_2020.pdf)) for more details.

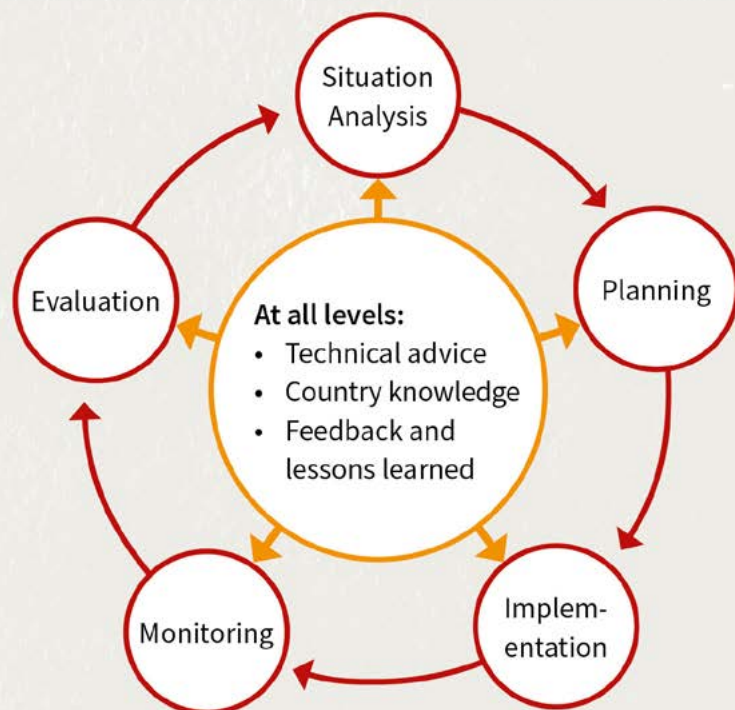
2. <http://www.iapb.org/advocacy/who-action-plan>

3. <http://www.un.org/disabilities/convention/conventionfull.shtml>

4. [http://www.who.int/neglected\\_diseases/NTD\\_RoadMap\\_2012\\_Fullversion.pdf](http://www.who.int/neglected_diseases/NTD_RoadMap_2012_Fullversion.pdf)

5. SAFE (Surgery, Antibiotics, Facial Cleanliness, Environmental improvements) is the WHO-approved methodology for trachoma elimination

### Project cycle management approach



The IEH initiative plan uses a project cycle management approach paired with sound technical advice and country knowledge, and is built on the principles of inclusion, comprehensiveness, and integration (see Figure), underpinned by a strong evidence base. It is focused, permits uniform understanding, and has an element of innovation.

### Working definitions in the Inclusive Eye Health Initiative

**Comprehensiveness:**

Includes all of these elements:

1. **Promotion** of healthy eyes and behaviour by raising awareness at all levels.
2. **Prevention** of eye diseases.
3. **Diagnosis, treatment and management** of eye diseases (medical, surgical, optical, low vision).
4. **Rehabilitation** – access to rehabilitation services (community-based inclusive development [CBID], vision rehabilitation, inclusive education, livelihoods and social inclusion).

**Inclusion:**

Ensures eye health programmes are accessible and welcoming to all members of the community, i.e. people from all disability groups, including vision impairment, and other marginalised and socially excluded people. Proactively ensures that people with long term vision impairment access their right to wider opportunities in rehabilitation, health, education, livelihoods and social inclusion.

**Integration:**

All work done is fully part of national health systems and policies.

# District Eye Health Programmes

## The Way to plan Eye Health System Change

The problems of blindness and visual impairment cannot be overcome by a single national programme. It needs to be in smaller, manageable units and it needs to be in partnership with stakeholders. This wisdom has been applied to the creation of district level Vision 2020 programmes and is also the approach of the IEH Initiative.

The units should be geographical units covering a population of about 1 million people (range 0.5–2 million) and should normally be in line with the administrative divisions of the country. Depending on the country, these may be called districts, sub-districts, regions, counties, states, etc.

Planning for a district level eye health unit must take into consideration any international and national strategies, such as the six WHO building blocks (see box) and national eye health strategies, as well as the above-mentioned working definitions. When assessing the situation in a district, gaps in the eye care service at the primary, secondary, and tertiary levels of the health system must be identified and addressed. Often eye care is not prevalent at the primary level and closing that gap brings eye care closer to the community, especially if community workers are part of the intervention. In addition, only patients with more serious eye conditions are referred for secondary and tertiary level care, ensuring that these provide the respective interventions (such as surgeries), instead of being overwhelmed with primary eye care problems (e.g. conjunctivitis).

Defining district level planning geographically, makes it manageable and makes it more likely that sufficient funds can be raised to support

the project. Rapid Assessments of Avoidable Blindness (RAAB)<sup>6</sup> studies done before and after the project measure changes of blindness and visual impairment prevalence and, if successful, the project can be used for advocacy to the government and as a model for wider health system change.

### CBM publication

Colin Cook and Babar Qureshi, 'VISION 2020 at the district level', Community Eye Health Journal, volume 18, number 54, 2005

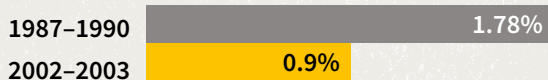
### The six WHO building blocks



6. RAAB: a rapid survey methodology developed by the International Centre of Eye Health at the London School of Hygiene and Tropical Medicine, UK.

### Pakistan National Surveys

#### Prevalence of blindness



#### CSR (cataract surgical rate)



CBM contributed to the generation of evidence on how to reduce the burden of blindness and visual impairment through the development and implementation of a district comprehensive eye care model. The government then replicated this in all districts, resulting in an increase in the number of cataract surgeries per 1 million population (the cataract surgical rate – CSR). This in turn contributed to a reduction in the national prevalence of blindness.

## Status Survey of CBM Eye Health Partners

In early 2020, for the first time, CBM carried out an in-depth research project into the status of our eye health partner organisations. The information it has provided is proving invaluable in pinpointing gaps that need to be addressed in order to achieve the aims of our IEH Initiative Plan.

The study involved 49 CBM partners in 18 priority countries and investigated the following elements: socio-economic and demographic profiles of the populations served; evidence and burden of disease in the target geographical area; service delivery; technology and consumables; health workforce; health information; health financing; leadership; and inclusion.

The methodology used for the situational survey included a desk review, a detailed questionnaire



Young patient in the Kilimanjaro Christian Medical Centre, Tanzania, one of the CBM Eye Health Partners.

sent to partners that asked for information in the above key areas, key informant interviews with a number of partner staff and virtual site visits to some of the hospitals.

### The study showed some very positive results in comprehensive, inclusive, and integrated service provision of our partners:

- ✓ More than two-thirds are active in promotional and preventative work, in addition to the diagnosis, treatment and management of eye diseases.
- ✓ All provide cataract and refractive error services and 78% also offer glaucoma services.
- ✓ Over half provide rehabilitation services for patients with low vision.
- ✓ Most are physically and financially accessible and have referral pathways to rehabilitation services in place.
- ✓ More than half have staff trained in disability inclusion and collaborate with organisations that help people with disabilities on a regular basis. Even so, a need was identified to further improve the results by carrying out more accessibility audits.
- ✓ Most already collaborate with, and are part of, their national government system.
- ✓ 86% feed their data into the national government system.

### Areas in need of improvement are:

- Availability of baseline data – both in terms of the prevalence of blindness and visual impairment, as well as the social and demographic profiles of the local populations.
- Availability of specialist eye health services, particularly in the areas of diabetic retinopathy and paediatric ophthalmology.
- Availability of specific eye care specialists.
- Financial and environmental sustainability.

Going forward, we will perform a thorough situation analysis using the WHO Eye Care Service Assessment Tool (ECSAT) and Rapid Assessment of Avoidable Blindness<sup>7</sup> (RAAB) studies in CBM target districts and the development of targeted district programmes. A CBM working group has been set up to address recommendations. So far, an environmental checklist and an action plan have

been developed for use during partner monitoring visits, as along with a quality monitoring framework and tool (see below), and an essential package of minimum service delivery standards for medical products, consumables and technology.

### Cambodia, Takeo City:

CBM supported Takeo hospital to improve its infrastructure, to train eye health teams and to monitor the outcomes of surgeries.



Takeo Hospital in 2006 ...



...and in 2013.

© CBM

## Quality Management

As a concept, quality involves: patient safety, patient-centred services, effective and efficient treatment (both clinically and in terms of costs), equitable access to timely services, and even the patient's overall experience. Good quality has been associated with increased surgery coverage, especially for cataracts.

Quality is not only about providing clinical services at a fair and equitable cost, it is also about the overall care given to patients from the point of entry to exit. It includes proper and respectful communication and provision of the necessary information, short waiting times and easy access to all areas of service delivery. A patient-centred and humane customer care service provision is an important part of the quality service delivery process.

In a first major step CBM introduced mandatory **Cataract Surgical Outcome Monitoring (CSOM)** for all eye health partners globally

in 2019. In 2020, this was followed by the development of a **Quality Management (QM) Framework** focusing on:

- various aspects of patient-centred care and patient safety
- guidance in technical areas such as cataract and refractive error
- monitoring of additional quality indicators besides the CSOM.

The Framework was first rolled out in the East Africa region. Here, each CBM Country Office has now formed a QM implementation team to facilitate the application of the QM Framework by all eye health partners in their respective countries. The teams are supported by at least one technical person, e.g. an ophthalmologist or optometrist from a partner. Partners who pass an external quality audit will be certified. As a next step, the QM Framework will be rolled out in other regions.

7. Please refer to page 12 for details on RAAB.

# Cataract Surgery: Technical Developments

Cataract is the major cause of avoidable blindness in the world and, at the same time, cataract surgery is one of the most cost-effective interventions in eye health.

Cataract surgery has always been a focus of CBM's clinical work and, over the years, the techniques have evolved from leaving patients with high powered spectacles and in dire need of optical rehabilitation, to small incision cataract surgery (SICS) with lens implantation, and finally to **phacoemulsification surgery** (phaco).

The current standard of SICS offers good results; however, phaco offers patients faster visual recovery<sup>89</sup> due to its smaller incision size (2.70–3.20 mm as opposed to 6.0–6.5 mm). This also causes less astigmatism and, hence, less need for glasses after surgery. Compared to SICS, using phaco means that cataracts can safely be operated on at an earlier stage, thus allowing patients earlier access to a cure. Both faster recovery and timelier cure ensure high patient satisfaction. On the downside, if performed by an unskilled surgeon, phaco can lead to much bigger surgical complications than SICS. A thorough selection process for trainees and high-quality training is therefore mandatory.

Phacoemulsification is the standard method for cataract treatment in western countries but is less available in the Global South where it is mainly

offered in private practices accessible only to wealthy patients.

In 2015, an idea for bringing the benefits of phaco surgery to patients who usually cannot afford to pay, or even contribute to the costs of cataract surgery, was proposed. With the combined expertise of its medical, programme and fundraising colleagues, CBM developed a strategy to establish phaco training centres, train ophthalmologists in CBM-supported hospitals and to supply the necessary equipment. The higher consumable costs of phaco surgery is still a challenge that we are working on.

In 2016, CBM partnered with the German company, Zeiss, to establish training centres with long-standing CBM partners. The first centre was inaugurated in 2018 with Fundación Visión in Asunción, Paraguay, and the second, with H.V. Desai Hospital of the Pune Blind Men Association in Pune, India, in 2019. For quality assurance, a working group comprising of International Council of Ophthalmology (ICO), CBM and CBM partners developed the 'ICO-CBM Phaco Surgeon Training Curriculum', which is used in the training centres and is also available online. (See box: other joint projects between CBM and the ICO)

By the end of 2019, 41 candidates had been successfully trained. In 2020, COVID-19 has affected the number of students and has also resulted in interruptions in training. We are hoping that CBM projects will offer affordable phaco surgery to all by 2025.

## Numbers of students supported by CBM in phaco training centres

Location	2018	2019	2020	Total
Fundación Visión, Paraguay	3	10	1	14
H.V. Desai Hospital, India	2	26	4	32
<b>Total</b>	<b>5</b>	<b>36</b>	<b>5</b>	<b>46</b>

Note: Status September 2020, the numbers in 2020 have been affected by COVID-19

8. Riaz, Y et al, Surgical interventions for age-related cataract. Cochrane Database Syst Rev, 2006(4): pCD001323

9. Pershing, S and Kumar, A. Phacoemulsification versus extracapsular cataract extraction? Where do we stand? Curr Opin Ophthalmol 2010

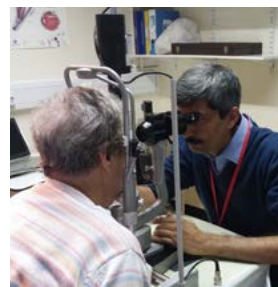
# Enhancing the Skills of Ophthalmologists from Developing Countries

## The Fellowships Programme with the International Council of Ophthalmology (ICO)

The ICO is dedicated to 'enhancing ophthalmic education and improving access to the highest quality eye care to preserve and restore vision for the people of the world.' In addition to organising the World Ophthalmic Congress, the ICO runs exams for ophthalmologists worldwide and supports fellowships for ophthalmologists from developing countries.

The ICO Fellowship Programme was set up to help promising young ophthalmologists from countries with low resources to improve their practical skills and broaden their perspectives of ophthalmology. Fellows spend 3 months in a host institution and are expected to bring the acquired knowledge and skills back to their home countries and take part in programmes to preserve vision and prevent blindness.

CBM started supporting the fellowship programme in 2004 and has so far funded 27 fellowships for students from a diverse range of countries, including Pakistan, Ethiopia, Colombia, Sudan, and Zambia.



© Courtesy of Dr. Ashraf

*'I want to convey my special thanks to CBM for sponsoring my 3-month ICO Fellowship in Glaucoma at Queen Victoria Hospital, East Grinstead, UK. I really enjoyed working with the glaucoma consultant there. I was able to learn from very*

*basic medical management to complex glaucoma surgeries from him. This fellowship will help me organise glaucoma services in our setting and transfer the acquired skills to my fellow doctors, thus enabling us to treat our glaucoma patients in a better way.'*

**Dr. Khalid Masood Ashraf, LRBT Free Eye Hospital, Pakistan (2015 Fellowship in East Grinstead, UK)**

## Other joint projects between CBM and the ICO:

- Phaco cataract surgery curriculum <http://www.icoph.org/downloads/ICO-CBM-Phaco-Curriculum.pdf>
- Inclusion for people with disabilities into the ICO residency curriculum
- Benchmarked programme in diabetic eye care for the Eastern Mediterranean region



**'Our congratulations to the committed team of CBM and their partner organisations for the effective work in sustainably improving eyecare delivery in developing countries. We are pleased to contribute to this success with our program and look forward to further collaboration with CBM!'**

**Prof. Seitz** Director of the Department of Ophthalmology at the Saarland University Medical Center in Homburg and former Director ICO Fellowship Programmes



## A New Approach to Link European Universities with CBM Project Partners

Different partners bring different capacities to the table. For example, while European universities have the potential to improve the service quality of CBM's eye care partners in low and middle income countries, the latter can provide unique opportunities for European doctors to enhance their knowledge of tropical and other diseases that they will not find in their home countries.

It is against this background that CBM created a University partnership concept to establish continuous partnerships between CBM, universities in Europe and CBM's partner hospitals in developing countries. It not only includes faculty exchange, faculty development and assignments, but also collaborative research and presentations to congresses. It also takes the training requirements of hospital managers into consideration, using existing training courses in India. The concept is flexible and can be adjusted to the requirements of all partners.

The first partnerships to be established under the new concept are between Rostock University

(Germany) and the Centre de Formation Ophtalmique d'Afrique Centrale (CFOAC; DRC), and between Saarland University (Germany) and Mengo Hospital (Uganda). While the Rostock / DRC partnership includes the uptake of paediatric ophthalmology, teleconsulting and research, the Saarland/Uganda partnership concentrates more on exchange visits and research. In both cases, CBM supports infrastructure and equipment as well as staff training courses.

**'For 20 years, we have found that dedicated exchange programs give deep and fruitful insights into different health systems with different challenges. Open discussions on priorities and how and when to implement innovations create a mutual atmosphere of responsibility following the "One World One Vision" motto.'**

**Prof. Guthoff, Senior Professor at the University of Rostock**



**Rostock University (Germany) and Centre de Formation Ophtalmique d'Afrique Centrale 'CFOAC' (DRC)**

**Persons in the picture from left to right:** Dr François Minzamba, former Director BDOM, Dr. Janvier Kilangalanga Ngoy, Director CFOAC, Dr Joséphine Belila Nkoy, former BDOM Deputy, currently the new BDOM Director, Dr Babar Qureshi, CBM Director IEH and NTDs, Prof. Rudolf Guthoff, Senior Professor Universitätsmedizin Rostock, Dr. Adrian Hopkins, Ophthalmologist



**Saarland University (Germany) and Mengo Hospital (Uganda)**

**Persons in the picture from left to right:** Selamawit Woldai, CBM Fundraising One to One, Rebekka Massoth, CBM Fundraising One to One, Dr Babar Qureshi, CBM Director IEH and NTDs, Dr Rose Mutumba, Medical Director Mengo Hospital, Prof. Berthold Seitz, Director of the Department of Ophthalmology at the Saarland University Medical Center in Homburg, Dr Lisbon Aliraki, Head of the Mengo Eye Unit Department, Richard Oneka, CBM Uganda, Marie Florence Prümm, CBM IEH Programme Manager, Dr. Rainer Brockhaus, CBM CEO, Prof. Dr. Barbara Käsmann-Kellner, Pediatric Ophthalmology, Orthoptics, Low Vision, Neuroophthalmology, University Saarland Hospital

## CBM's Partnership with Peek Vision Ltd

### Chartering new frontiers for evidence-based solutions in eye health services

Peek Vision Ltd. is a social enterprise with offices in London (UK), Botswana and Kenya. It has developed smartphone-based solutions that address some common challenges such as lack of eye health workers or low coverage. These tools are aimed at increasing efficiency by allowing identification (screening) to be performed by non-specialists on many people.

**Peek Acuity**, a clinically validated smartphone app for visual acuity testing, takes less than one minute to test each eye. Peek Capture incorporates the functionality of Peek Acuity with added features for data storage and analysis. This helps in measuring coverage and adherence of patient referral, by tracking a patient's journey from screening to treatment.

Peek Acuity is also part of mRAAB7, the mobile app for RAAB7.

CBM and Peek Vision Ltd. have formed a multi-year partnership to roll out Peek solutions in several countries. This collaboration brings together expertise from both sides – CBM's well-established, existing network of local partners in the countries combined with its in-depth experience in

programme design and implementation, and Peek's technological expertise and products.

The programmes will be conducting screenings and referrals based in schools and community settings, as well as research to understand the prevalence of eye health problems. The difference in the programme design is the use of Peek tools for visual acuity testing, referral of patients for further services such as refraction or hospital-based treatment, and follow-up for adherence of service uptake.

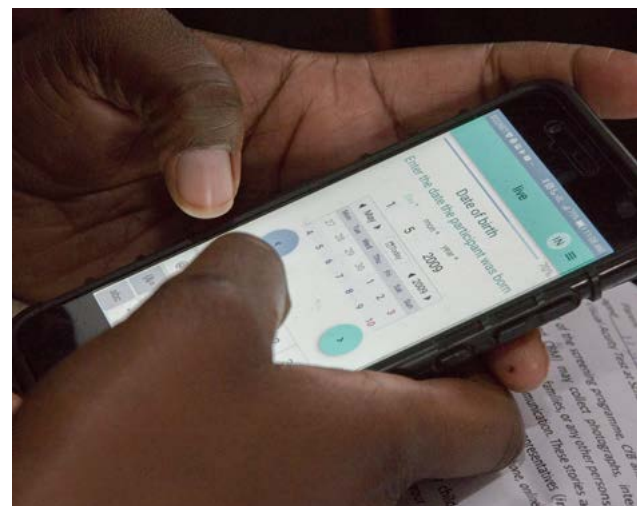
The first programme was launched in Pakistan's Talagang tehsil in November 2018. It used Peek Acuity for screening and Peek Capture to link patients with CBM supported eye care services and to track adherence to the same. This was later followed by a mRAAB7, which helped in a deeper understanding of the prevalence of blindness and visual impairment in the tehsil.

The main gains of these programmes have been to bring eye health services closer to those in need. Optometrists were recruited at secondary level to provide refractive error services, thus reducing the workload at the tertiary tehsil hospital. Using the Peek system, it has been possible to track referrals and adherence.

Screening programmes were also launched in Harare, Bulawayo and Mashonaland West provinces of Zimbabwe.



Screening and data entry using Peek technology.



## Case study



Geoffrey gets his new glasses

**Geoffrey (11)** is a smart and brisk boy who attends Thomas Baines Junior School. Problems with his eyes started when he was 4 years old. He complained about his vision to his mother. They went to a hospital and were told that the problems were caused by allergies. Geoffrey got medication but still could not see any better than before. His eyes hurt when he read, and he could only read with one eye. At school, he sat at the front of the classroom to see what was written on the blackboard. Geoffrey's mother admits that she didn't take his complaints too seriously.

In 2019, Thomas Baines Junior School took part in a field test of the screening using Peek technology and Geoffrey was found to need spectacles. He went to CBM partner Council for the Blind's refractionist and chose his spectacles. His mother Gina joined him because parents need to give their consent for their children to get spectacles and pay for them (spectacles bought from Council for the Blind are subsidised, but are not free).

Parents are encouraged to urge their children to wear spectacles. This aspect should not be neglected: spectacles are usually very expensive, if not subsidised, so only a few people wear them. It is common that only one or two students, sometimes nobody, in a class have spectacles. Wearing spectacles, then, is not only a matter of money but also of confidence if you are the only one with spectacles.

Geoffrey is very happy that he got spectacles and is willing to wear them. Now he can read without pain, sees what is written on the blackboard without problems and actively participates in class. He is a good student; his favourite subject is maths and wants to become an engineer. His mother laughs and says: 'His desired career changes every day!'



Geoffrey can now actively participate in class.

## Eye screening with the Peek Acuity mobile app in Harare, Zimbabwe

In preparation for the screening (as is standard practice in CBM's programmes) CBM's partner, Council for the Blind, contacted teachers to hand out consent forms for the students' parents to ensure that only students with consent forms were screened. On the day of the screening, students waited outside the room or hall where the screening was to take place. There, a member of the screening team explained how the screening works.

The students then went into the room, showed their consent form to the screener and were allocated to chairs. Several students can be screened at the same time. After screening, the students were told by the screener if their vision was good enough or if they needed to take part in a triage. Also, screeners

asked the students about any other eye problems like redness or itchiness. If the student's vision was inadequate, or if there were any other problems, the name and contact details of the student was recorded in the Peek Capture app. The parents of these children received automated SMS (text) messages in their local language notifying them of the result of the screening. The head teacher or contact person for the school also received an SMS list of the children in their school who required further support and reminders for those who had not yet received testing. The students referred to the next step, triage, received a full vision test using Peek Acuity from ophthalmic nurses, who also examined the eyes for any non-refractive conditions. The nurse decided whether the student needed glasses, and therefore to see a refractionist, or if the student needed to see a doctor at the hospital because of severe problems.

## Vision 4 Africa

### Change the lives of children and adults in Africa – now and for generations to come

The Partnership, Vision 4 Africa, is a consortium of the four largest global eye health organizations: Orbis International, Sightsavers, The Fred Hollows Foundation and CBM.

At the heart of our approach is our collective commitment to universal health coverage and the belief that health systems must strive to close the access gap for the most marginalised and disadvantaged. Our shared values and methods emphasise working in partnership with national governments, communities and non-governmental partners, bringing global learning to support the delivery of high quality, sustainable eye health services.

Having reached the Top 100 of the MacArthur Foundation '100&Change' competition, Vision 4



Africa is now a member of the **Lever for Change Bold Solutions Network**, a collection of highly-rated, rigorously evaluated proposals ('bold solutions') that emerge from open competitions managed by Lever for Change and which are searchable online. See the Vision 4 Africa video and factsheet on the Lever for Change website or go directly to the Vision 4 Africa webpage.

#### Lever for Change website:

<https://solutions.leverforchange.org/100-change-2020/vision-4-africa-joining-forces-to-tackle-the-blindness-crisis/>

#### Vision 4 Africa webpage:

<https://www.vision4africa.info/>

# COVID-19

© Heiko Philippin



From the WHO declaration of a public health emergency on 30th Jan 2020, to the declaration of a pandemic on 11th March 2020, and until the time of writing this report, the COVID-19 outbreak continues to pose a significant challenge to public health systems, including eye care. Strengthening health systems has become even more of a priority, and CBM's IEH will continue to monitor the situation and its impact on eye care service delivery in general. This will help our partners to continue to provide the best possible services to those in need in the present circumstances.

In March 2020, CBM convened a COVID-19 core group to respond to the varied and multi-faceted nature of growing challenges (and opportunities) presented by the pandemic, with a focus on eye health settings. Resources to support partners with COVID-19 related requirements were provided through designated COVID-19 response funds.

## Guidance notes

Two guidance notes were issued, which consisted of recommendations to CBM eye health and NTD partners for the prevention, control and minimisation of the risk of COVID-19 infection at various contact points in eye care service delivery. The Guidance Notes carry an important caveat that they should not be interpreted as a policy document and do not supersede instructions by Government (national, local) Ministries of Health and other administrative units, and that it is recommended that partners develop their own protocols as per national guidelines and stage of the pandemic. The Notes focused on the following:

### Guidance Note 1

Developed and disseminated in March 2020, at a time when COVID-19 outbreak was beginning to spread and had resulted in nationwide lockdowns or severe restrictions on movement to curb its spread. The objective of the first edition of this Note was to provide practical recommendations for eye units/hospitals and community level clinics:

- At eye units/hospitals: tele-consultation where possible, outpatient patient management at triage, and rescheduling of non-emergency treatment
- At community level: raising awareness (accessible posters, media, signages, etc.), inclusive WASH, etc.

### Guidance Note 2

Released in April 2020, this complements Guidance Note 1 with recommendations for protection, testing and isolation.

In July 2020, many eye health partners who had been limited to addressing only emergency ophthalmic cases, began planning on resuming routine eye care services to address the growing backlog. In response, CBM produced a short note for its partners focusing on key actions for safe resumption and patient management.

### CBM 'COVID-19' publications in the Community Eye Health Journal, volume 33, number 109, 2020

- Manfred Mörchen, Harpreet Kapoor, Sara Varughese. *Disability and COVID-19.*
- Victor Hu, Fatima Kyari, N Venkatesh Prajna, Astrid Leck, Simon Arunga, Esmael Habtamu, Elmien Wolvaardt and Heiko Philippin. *Responding to COVID-19 in eye health.*
- Celeste Pavón de Miltos and Rainald Duerksen. *The importance of planning in the face of the COVID-19 pandemic in Paraguay.*
- Heiko Philippin, Karin M Knoll and David Macleod. *COVID-19 numbers and models: misleading us, or leading us out of misery?*



**CBM** Christoffel-Blindenmission Christian Blind Mission e.V.  
Stubenwald-Allee 5 • 64625 Bensheim  
[www.cbm.org](http://www.cbm.org)