The past, the present, and the future Kenya eye care programs, "Lest we forget"

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Abstract
This article is intended to remind future generations to never forget and to sustain the great efforts made by pioneers of eye care services in Kenya. The information was collated through review of document and phone interviews.

Kenya was a British colony from 1920 to 1963. The British Empire Society for the Blind (BESB) was founded in 1950, renamed Royal Commonwealth Society for the Blind in 1957 and Sightsavers in 1987. In 1956, BESB established the Kenya Society for the Blind and the Kenya Ophthalmic programme (KOP). Sightsavers has been supporting Kenya since then. During the launch of VISION 2020 in 2001, KOP was upgraded to a Division of Ophthalmic Services (DOS) of the Ministry of Health. In 2010, health services were devolved to Counties. In 2013, DOS was renamed Ophthalmic Services Unit and Eye Health Section in 2023.

Training of Ophthalmic clinical officers, ophthalmologists, community eye health workers, ophthalmic nurses, optometry technologists, BSc optometrists, BSc Comprehensive Ophthalmology and Cataract Surgery, and ophthalmology fellows started in 1959, 1978, 1996, 2003, 2006 and 2009, 2015, 2024 respectively.

In 1976, the International Eye Foundation launched a Kenya-wide Rural Blindness Prevention Programme and completed the first Kenya Blindness survey in the 1980's. Provision of eye care in urban areas started in 2007 when Sightsavers launched the Nairobi Comprehensive Eye Services Project and an eye survey in Kibera and Dagoretti. Moreover, the private sector has grown in leaps and bounds. Visionary leadership and continuous advocacy are needed to steer our eye health services into a prosperous future.

Key words: Kenya, Eye, Health, Programme, History

Introduction

Brief accounts of the history of Kenya eye care services have been published in the year 2000(1) and in 2018. (2) New developments have taken place since the last update and this article provides a more detailed account of the development of eye health systems in Kenya. "Lest we forget" is a phrase which is commonly used during remembrance of service and sacrifices of people involved in war. The phrase originated from an 1897 Rudyard Kipling poem and the book of Deuteronomy Chapter 12:6. (3) In this article it is used to remind future generations that they should never forget the great efforts and sacrifices made by those individuals and organizations who built the Kenya Eye Health Services to the level they are today. Kenya was officially declared a British Colony in 1920 and gained independent in 1963. The history of Kenya Ophthalmic programme (KOP) would not be complete without reference to the colonial structures under which it was created. The information in this article was collated through review of documents and phone interviews with key informants.

Origin of the Kenya Ophthalmic programme

The British Empire Society for the Blind was founded in 1950 by Sir John Wilson who was himself blinded by an explosion in a chemistry laboratory.(4) The Society replicated similar societies for the blind in British colonies. In Kenya the Kenya Society for the Blind (KSB) was established in 1956 through an Act of parliament.(5) In the same year, the KOP was created and placed under KSB management. (1) In 1957, the British Empire Society for the Blind was given royal status by Queen Elizabeth II and its name was changed to the Royal Commonwealth Society for the Blind (RCSB). Similarly, KSB and KOP were under RSB oversight. In 1986, a British children's TV programme named Blue Peter launched a very successful 'Sight Saver' appeal to celebrate Queen Elizabeth's 60th birthday and raise funds for eye care in Africa.(4) Sightsavers continued to fund KOP solely through KSB until early 2000 when KSB became a separate non-governmental Organization with eye care, education and rehabilitation programmes.

Development of coordination structures

KOP was managed by the KSB and funded by international NGOs. The Government of Kenya supported KOP by providing infrastructure (land and eye clinics) and human resource. In 1966, a Prevention of Blindness Committee (PBC) was formed to coordinate eye care services. The PBC was one of the four sub-committees of the KSB Council. The other three were Finance, Education and Rehabilitation, and Public Relations and Fundraising. The initial PBC members were mainly representatives of NGOs, and majority were expatriates. The Ministry of Health (MOH) was represented by a Senior Deputy Director of Medical Services (SDDMS). The SDDMS who served as PBC chairmen included doctors Naphtali Agata, Martin Kayo, James Gesami, Peter Gaturuku, Ambrose Misore, Shahnaz Sharif, and Francis Kimani. The KSB directors who were involved in management of KOP included Mr. Samuel Tororei, Mr. John Cheruiyot, and Mr. Wilson Noreh.

The PBC had a scientific committee of eye health professionals to advise on technical issues. The Chairman of the Committee was Prof. Henry Adala from University of Nairobi. The members included Provincial Eye Surgeons (PESs), and representatives of training institutions and referral eye units. Ophthalmic Clinical Officers (OCOs) were successively represented by Mr. Kiarie, Mr. Francis Matheri and Mr. Ronnie Mulatia.

The office of Kenya Ophthalmic Programme Coordinator's was created at KSB in 1990 and Dr. Dharminder Singh Walia from MOH posted as the first KOP Coordinator (KOPC, 1990-1993). The second KOPC was Dr. Tenin Gakuru (1994-1995) from MOH and third was Prof. Jefitha Karimurio (1995-2001) from University of Nairobi. KSB posted an experienced, hardworking, and committed Secretary, Mrs. Zipporah Mulinge to support KOPC in programme management.

After establishment of the KOPC office in 1990, ten eyecare zones were created to improve service coverage in the areas without ophthalmologists.(1) The zones were conveniently curved around referral eye units. For example, the Zonal Eye Surgeon (ZES) of Machakos covered Machakos, Kitui, Makueni and South rift Valley (Kajiado and Loitokitok). Nanyuki eye unit in Rift Valley Province was placed under the ZES of Nyeri (Central Province) because Nanyuki is far from Nakuru which was the headquarter of Rift Valley Province. Rift valley Province had one ZES in Nakuru and another in Eldoret; Eastern Province had ZESs in Machakos and Embu; Nyanza Province Kisumu and Kisii; and Central province Nyeri and Kiambu. The other provinces had one ZES each. Garissa eye unit in North Eastern Province had no ophthalmologist, and it was served from Kikuyu Eye Unit. The Christian Blind Mission (CBM) funded air outreach services from Kikuyu and Sabatia eye units to remote areas in Kenya and neighbouring countries through Mission Aviation Fellowship (MAF). The post of PES became redundant after appointment of ZESs. The zonal referral eye units (and successive ZESs) were Mombasa (Dr. Francis Waweru), Machakos (Prof. Jefitha Karimurio, Dr. John Oduor), Embu (Dr. Arie Osterwick), Nyeri (Dr. Fanuel Othero, Dr. Mohamed Eisa, Prof. Jefitha Karimurio, Dr. Daniel Kiage, Michael Gichangi), Eldoret (Joram Odede), Nakuru (Kipkorir Limo, Ciku Mathenge), Kisumu (Dr. Fanuel Othero), Kakamega (Dr. Watson Ingosi), Kikuyu/Garissa (Dr. Mark Wood, Dr. Dharminder Walia, Prof. Stephen Gichuhi and Dr. David Yorston,), Kisii (Dr. Eric Abunga), and Kiambu (Dr. Fayaz Khan).

A historic change in coordination of eye health services in Kenya occurred in 1993 when the scientific committee was merged with PBC, and local professionals were included in decision making. On 11th June 1993, a special PBC committee meeting was convened under the chairmanship of Dr. Naphtali Agata (SDDMS) to formalize the creation of an expanded PBC and its terms of reference. The members who attended the meeting were Mr. Michael Dunford (KSB Council Chairman), Mr. Allan Pickering (KSB), Mr. Peter Dixon (Sightsavers Regional Director), Dr. Randy Whitefield Junior (Operation Eyesight), Dr. Dharminder Walia (KOPC/ called from study leave), Dr. Tenin Gakuru (Acting KOPC), Prof. Henry Adala (University of Nairobi), Mr. John Cheruiyot (KSB Deputy Director), Mrs. Nyokabi Kinyanjui (Sight by Wings), Dr. Arie van Oosterwyck (Prof. Weve Foundation), Dr. Eric Abunga (Kisii Eye Unit), Dr. Mark Wood (Kikuyu Eye Unit), Dr. Kipkorir Limo (Nakuru Eye Unit), Mr. Ronnie Mulatia (OCO representative), Dr. Ashok Shah (Lions Clubs International District 411), Dr. Fayaz Khan (Kiambu Eye Unit), Dr. Daksha Patel (University of Nairobi), and Dr.

Pamela Ngaira (Kenyatta National Hospital).

The new membership of the PBC which was agreed on at the special PBC meeting was as follows:

- PBC Chairman: Senior Deputy Director of Medical services of the MOH
- Vice chairman: Kenya Ophthalmic Programme Coordinator
- Secretary: Director Kenya Society for the Blind
- Chairman University of Nairobi Department of Ophthalmology,
- All zonal eye surgeons,
- Ophthalmic Clinical Officers representative
- Operation Eyesight Universal representative,
- Regional Director of Sightsavers,
- Christian Blind Mission representative,
- Representative of Local Lions service club,
- Representatives of local service organizations and
- Any other member, non-voting to be co-opted by the committee as required from time to time.

The PBC terms of reference which were ratified by the special meeting covered eye care need assessment, and planning, allocation of resources, monitoring and evaluation. The roles of MOH, KSB, NGOs, KOPC, ZEs, training institution and other PBC members were outlined in the terms of reference.

In February 1996, the then MOH Director of Medical Services Dr. James Mwanzia made the following further changes in PBC leadership:

- KOPC was appointed MOH representative to KSB Council. Previously, it was the SDDMS who represented KOP in the KSB Council. Since 1996, successive heads of eye care services have been representing MOH at KSB Council. The current head is Dr. Michael Gichangi.
- SDDMS Curative Services and KOP were retained as PBC Chairman and Vice-chairman respectively.

A Global Initiative for the elimination of avoidable blindness known as VISION 2020 "The Right to Sight" which was sponsored by International Agency for the Prevention of Blindness and World Health Organization was launched in Kenya on 12th June 2001 at Kenyatta National Hospital. The Chief guest Prof. Sam Ongeri the Minister for Public Health was represented by Assistant Minister Hon. Abdulahi Haji Wako. During the launch, the minister approved that KOP be upgraded to a Division of Ophthalmic Services (DOS) of MOH. As a result, the MOH took over coordination of eye services and the then KOPC, Prof. Jefitha Karimurio of University of Nairobi, became the founder head of DOS. The successive heads of DOS were from MOH. They were Dr. Kipkorir Limo (2002 to 2005) and Dr. Michel Gichangi (2005 to 2013). In those days Kenya had relatively few doctors and that is why University of Nairobi lecturers were being appointed to serve in senior posts at the MOH, including heading eyecare services. Some of the Directors of Medical Services who were from University of Nairobi and played a role in development of eye health services included Prof. Thomas Ogada, Prof. Gideon Okelo, Prof. Julius Meme, and Prof. John Oliech.

In 2003 PBC was replaced with the National Prevention of Blindness Working Group (NPBWG) of MOH.

A new constitution was promulgated in Kenya in 2010, and administrative districts replaced with 47 Counties with autonomous County Governments. Delivery of health services was decentralized to Counties. The main role of National government is policy formulation. In eye care, zones were replaced with Counties as the official units of service delivery. Zonal Eye Surgeons were replaced with County Ophthalmologists and County Eye Care Coordinators. These national administrative changes resulted in successive ripple effects characterized with several restructuring of MOH and eye health coordination structure. In 2013, DOS was replaced with Ophthalmic Services Unit (OSU) and Dr. Michael Gichangi who was the head of DOS appointed Head of OSU. The NPBWG was expanded to form an inter-Agency Coordinating Committee for Eye Health (ICC, EH). The ICC, EH included representatives of the main sectors involved in eye care. In 2020, the ICC, EH was renamed National Eye Health Working group (NEHWG). In 2023, OSU was changed into an Eye Health Section (EHS) with Dr. Michael Gichangi as Head to date.

Human resource development for eye care

In the colonial times, eye services were mainly provided by foreign doctors, and opticians who came from India during the building of railway line in 1900's.(2) Training of local skilled eye care workers commenced as follows:

- 1959: Training of Ophthalmic Clinical Officers was started at the Kenya Medical Training College (KMTC). The training was coordinated, by the KSB Director and later by KOPC. It was fully handed over to the KMTC in 1996. The handing over followed consultations between the then Director of Medical Services Dr. James Mwanzia, Director KMTC Mr. William Boit, and Prof. Jefitha Karimurio, the KOPC. KMTC agreed to build adequate capacity for training of midlevel eye health workers with technical support from the KOPC.
- 1978: M.Med in ophthalmology training was started at the University of Nairobi. The training was initially supported by KSB and other eye care NGOs.
- 1996: Community eye health workers training commenced at district/county level.
- 2003: Ophthalmic Nurses training at the KMTC

- 2006: Training of optometry technologists at the KMTC
- 2009: training BSc optometrists started at the Masinde Muliro University of Science and Technology
- 2015: Jomo Kenyatta University of Science and Technology in collaboration with Sabatia Eye Hospital started training for Bachelor of Science in Comprehensive Ophthalmology and Cataract Surgery
- 2021: Kaimosi Friends University started Bachelor of Science in Optometry and Visual Sciences training
- 2024: The College of Ophthalmology of Eastern, Central and Southern Africa (COECSA) initiated a fellowship in ophthalmology training at Moi Teaching and Referral Hospital

In addition to above cadres, Kenya has several ophthalmic subspecialists who have trained in foreign countries. The subspecialties include orbit and oculoplastic, retina, paediatric ophthalmology, glaucoma, public eye health, retinoblastoma, anterior segment, and cornea. Currently, COECSA is building capacity for local training of subspecialists in addition to accrediting additional sites for fellowship in ophthalmology training.

Delivery of eye care service

Prior to the creation of KOPC in 1956, Kenya had limited and uncoordinated eye care services. In 1960, mobile outreach services to the rural areas commenced and the outreaches were conducted by the OCOs who graduated from the KMTC. The outreach vehicles were based at and managed by KSB with sponsorship from NGOs.

The first evidence-based eye care programme in Kenya was established in 1976, by the International Eye Foundation. (6,7) The foundation sponsored a Kenya-wide Rural Blindness Prevention Programme and conducted the first Kenya Blindness survey which was completed in1980's.(5) The survey results indicated that the most prevalent causes of blindness in Kenya were cataract and trachoma. In view of these findings, the KOP sole aim was to restore eyesight in patients with reversible causes of blindness, especially cataract and to prevent blindness from preventable causes like trachoma.

Provision of eye care in urban communities commenced in 2007 when Sightsavers:

- Sponsored the Nairobi Comprehensive Eye Services (NCES) project,
- Constructed the NCES referral eye unit at Mbagathi Hospital,
- Sponsored a population-based survey in Kibera and Dagoretti to verify the prevalence and types of eye diseases in the urban population.

So far, several modalities of eye care service delivery have been tried in Kenya by different organisations and institutions to explore the most suitable methods of delivering services. Before the year 2000, eye care services were mainly provided using mobile outreaches due to shortage of skilled eye health workers. However, it was becoming increasingly clear that this modality of service delivery was expensive and unsustainable. By the year 1995, the KOP had 21 mobile units managed by KSB with support from Operation Eyesight Universal and Sightsavers. Simultaneously, international NGOs including Operation Eyesight Universal, Sightsavers, AMREF, Professor Weve Foundation, Lions, CBM, Fred Hollows Foundation, Salus Oculi stepped up construction and equipping of static eye clinics. They also funded the services delivered by the static clinics. Mobile outreach services were gradually phased out in favour of static eye units as the preferred modality of service delivery.

The other modalities of service delivery included:

- Satellite eye units where specialists from a referral institution went to train and support district/county level teams to clear their surgical backlog. This modality of service delivery has been very beneficial in training of postgraduate students at the University of Nairobi because it provided high volume surgical setting. The hospitals which served as satellite surgical centres for the university of Nairobi included Narok County Referral, Litein mission, Garissa County Referral, Murang'a County, Kitui County Referral, Mwingi sub-County Referral, Muthale mission, Meru County Referral, and Isiolo County Referral,
- Community-based eye camps where eye treatment and surgery are conducted at the community level,
- In-reach which is a special type of outreach where referral eye facilities screen patients at community level and transport them to their base hospital for surgery.

All the above modalities of delivering eye care services have strengths and weaknesses. Consequently, the most appropriate modality or combinations of modalities should be adopted to meet individual community needs and provide "the best possible eye care to the majority". For example, in the trachoma endemic Counties, community outreach may be the preferred modality for trachomatous trichiasis surgical services and static eye units for cataract surgical services. In-reach may be more cost effective and appropriate modality for densely populated areas, but it is expensive in sparsely populated areas because of the high cost of overheads. Community level surgical camps may still be the most effective modality to reduce backlog of cataract in marginalized areas, but effective postoperative follow-up should be ensured.

In the past decade, eye services have been growing exponentially with the private sector leading in this growth. Currently, Kenya has many Eye Centres of Excellence with high quality outputs.

Special national eye care programmes

From time-to-time special programmes and project have been created to address specific need in eye care. The notable ones are Kenya Primary Eye Care Programme, Trachoma Elimination Programme, Eye Health Information System (EHIS) Programme and a landmark microsurgery with intraocular lens (IOL) project sponsored by the Fred Hollows Foundation which empowered local ophthalmologists to conduct IOL implantation.

National Primary Eye Care Programme

In 1995, an evaluation was conducted in 70 eye units in Kenya by Prof. Karimurio and Dr. Kipkorir. It revealed that KOP was an eye program "without a base" since the Programme had clinical personnel (Ophthalmologists and OCOs) with no grassroot support. This information was used to lobby the MOH and partners to fill the gap. In 1996, the MOH declared Primary Eye Care Programme (PEC) as the thirteenth element of Primary Heath Care Programme (PHC) in Kenya. This breakthrough was famously referred to as "the Machakos Declaration". Initially, PEC was managed by an expatriate (Ms. Georgina Mawer) from Volunteer International Oversees (VSO). Later MOH posted Mr. Mohamed Liban of Isiolo to KOP as the first National PEC Manager. The second PEC Manager was Dorcas Chelang'a. After decentralization of health services to the Counties in 2010, PEC services were handed over to the County teams.

National Trachoma Elimination Programme

Trachoma is one of the oldest blinding and neglected tropical disease (NTD). The first national blindness survey conducted in 1980s by International Foundation indicated that trachoma was the second leading cause of blindness in Kenya. Active trachoma was reported to be the commonest ocular disease in rural Kenya with 18.7% of the total population and 25% of children <10 years affected(6,7). The survey was however conducted using the old McCallan trachoma grading, and therefore the results cannot be directly compared with results from recent trachoma surveys. The Simplified trachoma grading scheme which is currently used in trachoma mapping was adopted by the World Health organization (WHO) in 1987. In 2004, trachoma surveys using the WHO simplifies trachoma grading scheme were commenced and an initial six districts suspected endemic districts surveyed.(8)

In 2006, a National Trachoma Taskforce (NTTF) was created by the NPBWG. In 2007 Kenya started rollout of the WHO recommended SAFE Strategy for elimination of blinding trachoma in known endemic areas. SAFE stands for Surgery for trachomatous trichiasis, mass drug administration with Antibiotic for active trachoma, and Facial Cleanliness and Environmental improvements to break transmission of active trachoma. In 2008, the first 5-year National Plan for Elimination of Trachoma was launched by the Minister for Public Health and Sanitation. The National Trachoma Elimination Programme was also created, and Mr. Ernest Barasa was appointment the National Trachoma Manager. Prior to this appointment, trachoma control activities were under the PEC Manager. NGOs have so far invested a lot of resources in trachoma elimination activities. The NGOs include Sightsavers, Operation Eyesight, Fred Hollows Foundation, CBM, AMREF and many other local NGO partners and institutions.

In 2019, MOH created a National Experts Committee for Elimination and Certification of elimination of neglected tropical diseases (NTDs) and transferred the Kenya Trachoma Elimination Programme from OSU to the Division of Vector borne and Neglected Tropical Diseases (VBNTD). The following further restructuring was done:

- Prof. Jefitha Karimurio from University of Nairobi was appointed as the trachoma expert to the NTD Experts Committee
- A National Trachoma Advisory Group (TAG) was formed under VBNTD and Prof. Karimurio appointed as the TAG Chairman
- National Trachoma Implementation Team (NTIT) Formed under the VBNTD and Mr. Ernest Barasa from OSU appointed NTIT Chairman
- County NTD Coordination Committees (CNTDCC) were formed.

Following the above changes in trachoma elimination programme, the role of EHS was limited to supporting the DBVNTD and Counties with for S and A components of the SAFE Strategy.

Eye Health Information System

The rapid expansion of KOP in the 1990's resulted in generation of lots of data on human resource, infrastructure and equipment, and eye care services. The data was required for planning, management, monitoring and evaluation. KSB had posted an experienced, Secretary, Mrs. Zipporah Mulinge, who assisted KOPC with data collection and reporting. However, the task was overwhelming and the MOH posted a Health Information Officer KOP. KSB supported the creation of a National Eye Health Information System programme (EHIS) which collated data from the Zones, prepared annual and special reports on magnitude and trends of eye diseases with public health importance. The first Eye Health Information officer was Mr. Simon Mbithi and the second was Mr. Kasim Ngotho. EHIS

later became the Kenya Eye Health and Epidemiology Unit under DOS and OSU. However, this programme fizzled out after the last Eye Health Information Officer, Mrs. Felista Mburu retired in 2018 without a replacement.

Microsurgery and intraocular lens implantation training project

Intracapsular cataract extraction with aphakic spectacle correction (ICCE+Specs) was the only surgical method conducted by Kenyan surgeons prior to 1996 when the Fred Hollows Foundation introduced extracapsular cataract surgery with posterior chamber intraocular lens implantation (ECCE+IOL). Initially, ICCE surgeons used the erisophake *(Figure 1)* to deliver the lens was ICCE. Erisophake was an instrument designed to hold the lens by suction during cataract extraction.(9)

Figure 1: Erisophake used to deliver the lens during for intracapsular cataract extraction

Later, in 1980's surgeons used cryo-extraction (*Figure 2*) to deliver the lens during ICCE.

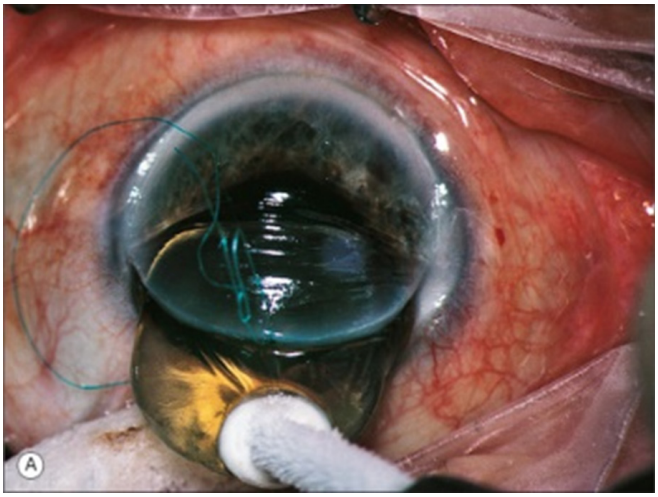

Figure 2: Cryo-extraction of the lens during for intracapsular cataract extraction (Roper-Hall MJ. Stallard's eye surgery. 7th ed. London, UK: Wright; 1989.)

In 1996, the Fred Hollows Foundation conducted a revolutionary microsurgery and intraocular lens (IOL) implantation training where local ophthalmologists were for the first time trained and equipped to perform extracapsular cataract surgery with posterior chamber intraocular lens implantation (ECCE+IOL). Before 1996, only a few expatriates in mission hospitals were performing ECCE+IOL.

Each conversion from ICCE to ECCE+IOL training lasted two weeks. The first training was hosted by the then Nakuru Provincial Hospital. The trainers were Dr. Richard Le Mesurier and Dr. David Moran from Australia. The first group of four ophthalmologists to be trained as trainers of trainers (TOTs) were Prof. Jefitha Karimurio the KOPC, Prof. Ciku Mathenge, ophthalmologist from Nakuru, Dr. Francis Waweru the ZES of Mombasa Eye Unit and Dr. Kipkorir Limo the ZES of Nakuru Eye Unit. The TOTs assisted in subsequent trainings in Kenya and other countries such as Ethiopia, Tanzania, Zanzibar, and Malawi among others.

After training each surgeon was given a Scan Optics microscope, two surgical sets and a seed donation of IOLs. Moreover, the Fred Hollows Foundation supplied KSB with adequate low cost IOLs, instruments, and microscopes to start a revolving fund. The fund sustained the project until other suppliers entered the Kenyan market.

The challenges faced during the initial microsurgery and IOL project included lack of biometry equipment and viscoelastic. Only "standard rigid spherical posterior chamber IOLs" of +20, 21, and +22 diopters were available. Spectacles were dispensed to correct any residual refractive errors and for reading. Viscoelastic was rare and expensive. We used air instead of viscoelastic to implant IOLs with relatively good visual outcomes. Currently, the methods of IOL implantation have improved from the original ECCE + IOL (Blumenthal technique), manual small incision cataract surgery (MSICS) to the currently preferred method of phacoemulsification. There are local suppliers of biometry sets, surgical equipment, IOLs, and viscoelastic. All varieties of IOLs are available including anterior chamber, posterior chamber, scleral fixated, unifocal, multifocal spherical, toric, clear, and tinted among others.

Other projects

Among the other notable projects which were critical in delivery of services included National Eyedrop Production Unit (NEPU) of the KSB which supported KOP with low-cost medicines. KSB trained one of its staffs, Mr. Daniel Masese, to manage the project. DOS also had an Ophthalmic Equipment Repair Project with Mr. Nicholas Mathenge as the medical engineering technician in charge who was not replaced after retirement. The private sector has effectively

filled this gap. KSB had an efficient supply chain for eye drops, equipment, and consumables for KOP.

The future of eye health services

Kenya has a vibrant eye health system which developed from the humble beginnings of 1950's. However, there are emerging opportunities and challenges which include:

- Harsh economic times that followed the Covid-19 pandemic. This has resulted in dwindling budgetary allocation to health, freezing of recruitment and promotions of staff, weak National Health Insurance, and dwindling funding for training programmes,
- Insurance industry is slowly taking control health service provision and dictating cost of services and how patients should be treated,
- Health, with eye services included, is rapidly becoming a profit driven business with growing pressure to adopt modern business approaches
- Rapidly advancing technology such as telemedicine, artificial intelligence, and robotic medicine which are beneficial but challenging to cope with
- Increasing sub-specialties and diminishing number of general ophthalmic workers which results in "over doctored patients" and high cost of treatment,
- Globalization and increasing competition and conflicts among eye health practitioners, institutions, and cadres,
- Kenyan population is currently more informed and is demanding high quality services. We are slowly drifting from the initial PEC emphasis on community approach where the aim is to provide the "best services for the majority" to individualized approach. This is both a challenge for the eye health system and an opportunity to stimulate growth.

Intensive continuous advocacy is needed to enable eye services to overcome these challenges, remain relevant, and be well resourced. Strengthening of the weakening coordination structures, especially at the national level, is also needed. Counties should step up delivery of eye services, reporting and monitoring performance. As we have learnt from the past experiences, visionary leadership and strong collaboration between government, NGOs and the private sector are needed to steer Kenya Eye Health Services into a prosperous future.

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Since 1956 when KOP was created, Kenya has recorded monumental growth in eye health including human resource, infrastructure, equipment, and services. The country would not have achieved the great milestones described in this article without the support of NGOs, private sector, training intuitions, and individuals. The NGOs which have sacrificially supported Kenya include Sightsavers, KSB, Operation Eyesight Universal, CBM, Fred Hollows Foundation, Professor Weve Foundation, AMREF, Lions Clubs International, Salus Oculi and Sight by Wings among others. The private sector has established eye health facilities which deliver high quality, high output services. The facilities also provide attachment for students from training institutions. The training institutions which have contributed to development of the required human resource include the University of Nairobi, Kenya Medical Training College, Masinde Muliro University of Science and Technology, Moi Teaching and Referral Hospital, and Jomo Kenyatta University of Agriculture and Technology. Various eye health professional societies have contributed a lot towards development of eye friendly policies, continuing eye health education, promoting of professionalism, and organizing skills update training. All eye health workers in Kenya have contributed to these developments and they should feel appreciated.

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