



National Eye Health Policy Liberia 2022-2032



“Toward universal health care”

Ministry of Health
Division of Preventive Health Services
National Eye Health Program

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Foreword



It is my honor to present the National Eye Health Policy of Liberia. Vision, the most dominant of our senses, plays a critical role in every facet and stage of our lives. For children, vision is a major component of their cognitive development and overall well-being and plays a critical role in their education. For adults, vision is important for livelihood and social life. The impact of vision loss is not limited to the individual but affects the family and the community. A family with a blind person could sink into poverty due to lost productivity, increased spending on seeking a cure from formal and informal systems, and loss of potential when children are removed from school to guide and take care of the Blind adult.

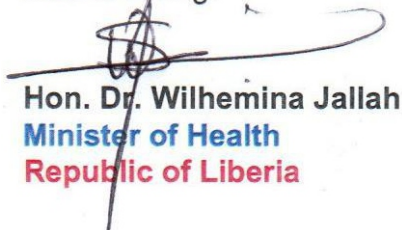
This policy provides for the prevention of visual impairment and blindness, the promotion of eye health, and the treatment of eye conditions at all levels of care. In particular, this policy serves as the guide to strengthen eye health services in the country and provides rehabilitation services for people with irreversible visual impairment and blindness.

The National Eye Health Policy, therefore, makes an important contribution towards our national agenda of transformation to middle-income status by reaching the poor and vulnerable population with eye health services, thereby raising educational attainment and increasing family and community income.

Eye health is multi-dimensional, cross-cutting all technical health programs, and linking to the Ministries of Education, Transport, and Gender Children and Social Protection. It, therefore, requires inter-disciplinary teams to deliver the provisions of this policy. Every county is responsible for making this policy a reality for its population. Private practitioners and Faith-based health institutions have a role in providing comprehensive eye care services. The beneficiaries of this policy, too, have a monitoring role and their voices are needed to engage with health workers for accessible, affordable, and quality eye health service. The Government of Liberia cannot deliver on the provisions of this policy alone. I, therefore, appeal to our developmental partners, national philanthropic groups, and Faith-Based organizations to support our efforts for the attainment of universal eye health coverage.

With this policy in place and the approaches for its implementation approved and supported, every Liberian will have an opportunity to access affordable and quality eye care, thus enabling all of us to contribute to making Vision 2030 a reality for our country.

Liberia Rising.



Hon. Dr. Wilhemina Jallah
Minister of Health
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Acknowledgements



The Ministry of Health, through the Eye Health Program in collaboration with Department of Policy Planning led the development of the National Eye Health Policy in Liberia. Extensive consultations were done with stakeholders including beneficiaries of eye services, community health workers, nurses and physician assistants, members of county health teams and all cadres of eye care providers from Government, Faith-based and private facilities. Program Managers, Directors and Ministers from the Ministries of Health, Education, and Gender, Children and Social Welfare were interviewed. Various drafts of the National Eye Health Policy were distributed to stakeholders for comments and feedbacks. This exercise resulted into a final draft that was presented to MOH Senior Management for technical validation and to Top Management for final approval.

On behalf of the Ministry of Health, we wish to express our sincere appreciation to all the stakeholders who contributed to the development of the National Eye Health Policy. In particular we are grateful to the consultant, Dr Alice Baingana Nganwa, and the core team of professional staff from Policy and Planning Department who worked pains takingly to make this policy possible. Many thanks to the WHO Program Officer responsible for eye health for reviewing the drafts.

We recognize the extraordinary leadership role of the **National Eye Health Program Manager** of the Ministry of Health, Dr Joseph L. Kerkula, and we are also grateful.

We extend special thanks and appreciations to Sightsavers International for funding the process of developing this policy, and to Dr. Nazaradden Ibrahim, the Sightsavers Global Technical Lead for eye health in West Africa for his invaluable technical input.

We hope the enthusiasm generated during the development of this National Eye Policy will continue long after its publication and subsequent launch as a clear demonstration of national commitment to improving eye health in Liberia.



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List of abbreviations and acronyms

AFT	Agenda for Transformation
CET	County Education Team
CHA	Community Health Assistants
CHP	Community Health Promoters
CHT	County Health Team
CMO	Chief Medical Officer
CPD	Continuous Professional Development
CS	Cataract Surgeon
DEO	District Education Officer
DET	District Education Team
DHIS	District Health Information System
DHS	Demographic and Health Survey
DHT	District Health Team
ejoint	Electronic joint (name of HRH Supervision and monitoring electronic system)
EPHS	Essential Package of Health Services
FBI	Faith Based Institutions
GoL	Government of Liberia
HC	Health Center
HReH	Human Resource for eye Health
HRH	Human Resource for Health
IAPB	International Agency for Prevention of Blindness
ICT	Information Communication Technology
IPCC	Integrated People-Centered Care
IPEC	Integrated People-Centered Eye Care
JFKLEC	John F. Kennedy Liberia Eye Center
JFKMC	John F. Kennedy Medical Center
LEC	Liberia Eye Center
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation and Learning
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
NCD	Non-Communicable Disease
NEHC	National Eye Health Coordinating Committee
NGO	Non-Governmental Organisation
NTD	Neglected Tropical Disease
OM	Orientation and Mobility
ON	Ophthalmic Nurse
OPD	Organisations of People with Disabilities

OPD	Outpatient Department
OT	Optometry Technician
PA	Physician Assistant
PAPD	Pro-Poor Agenda for Prosperity and Development
PBF	Performance Based Financing
PECI	Primary Eye Care Interventions - a WHO package of health services
PECW	Primary Eye Care Worker
PHC	Primary Health Care
PWD	Person with Disability
RAAB	Rapid Assessment of Avoidable Blindness
RDF	Revolving Drug Fund
SDG	Sustainable Development Goals
SNE	Special Needs Education
UEC	Universal Eye Care
UHC	Universal Health Care
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
V2020	Vision 2020
VEGF	Vascular Endothelial Growth factor
VI	Visual Impairment
VT	Vision Technician
WASH	Water, sanitation and hygiene
WHA	World Health Assembly
WHO	World Health Organisation

Glossary

Primary Eye Care Worker	For this policy a Primary Eye Care Worker is a community health worker, clinician or nurse who has received additional short-term training in eye health based on the WHO training manual in primary eye care. They can screen for visual impairment, identify and treat common eye conditions, provide eye health education and refer difficult conditions.
Ophthalmic personnel	For this policy, ophthalmic personnel refer to personnel who may or may not be a health worker and had received training in eye health from a recognized training body for at least one year. They have received certificate or diploma training in eye health. They include ophthalmic nurses, ophthalmic theatre nurses, cataract surgeons, vision technicians and ophthalmic technicians.

1.0 Introduction

1.1 Background

It is estimated that 1%ⁱ of the population in Liberia is blind, 3% with low vision and twice that with moderate refractive errors. Everyone during their life-course will experience at least one eye condition that requires the appropriate care. Everyone requires services that prevent eye conditions and promote eye health. Eye disease and vision impairment pose a significant personal and societal burden by severely impacting well-being, imposing an enormous financial burden to the family through treatment, care and loss of productivity. Improving access to eye care services will promote health, quality of life and income of the people in Liberia.

1.1.1 Socioeconomic situation

Liberia has a population of 5,732,960 of whom 50.2% are urban dwellers, 43.4% of the population are less than 15 years of age. Thirty three percent are youth between 15 and 35 years of ageⁱⁱ. The population older than 65 years is 3.3%ⁱⁱⁱ. Liberia's GDP per capita is UD \$583, a decline from 2019, attributed to the Covid 19 pandemic^{iv}. The economy is heavily dependent on agriculture, fisheries and forest-related production and export. Mining and remittances are important foreign currency earners and are expected to contribute considerably to the economic rebound.

Liberia has faced daunting challenges that affected and continue to impact its economic growth. Most significant were the two wars between 1998 and 2003 which ravaged the country. At the height of rapid economic recovery Liberia was hit by the Ebola epidemic in 2014/15 which paralysed the country^v. Before full economic recovery from Ebola, the Covid 19 pandemic lockdowns shrunk the economy by 6.2%. Nonetheless, these challenges have left Liberia more resilient, especially in the health sector. It is this strength that initiated the development of the National Eye Health Policy and will ensure its implementation.

According to the 2019/2020 Demographic and Health Survey (DHS)^{vi}, 41% of females and 30% of males age 6 and older have never had any formal education. Only 5% of women and 8% of men have completed senior high school. The primary school net attendance ratio for the population age 6-11 is 43% (41% for girls and 45% for boys). The disparities between girls and boys, women and men persistent to negatively impact females in other dimensions including poverty, paid employment and housing.

1.1.2 Health care service in Liberia

1.1.2.1 Health care system

Liberia has 15 administrative counties which are further divided into 136 districts. Public health care is provided through a three-tier system^{viii}: Primary; Secondary; and Tertiary care. Often referred to as the big six, Montserrado, Nimba, Bong, Lofa, Grand Bassa, and Margibi account for 75% of the total population. Currently, County Health Teams (CHTs) are the operational arms of the MoH. Under the directive of the central MoH, County Health Teams manage all Ministry-owned health facilities.

The defining roles of the three levels of care are described below:

(i) Primary health care

Community Health Assistants, Community Health Promoters, and Trained Traditional Midwives provide health promotion, referrals, and a select package of health services specific to each cadre. Community Health Assistants serve communities more than one hour walk from the nearest health facility and provide the broadest range of community-level services. Community Health Promoters serve communities within 5km of the nearest health facility and provide a more limited set of services to 300-500 people.

PHC Level 1 Clinics that service remote communities covering up to 3,500 people.

PHC Level 2 Clinics which serve a population of 3,500-12,000 people. They provide static and outreach services.

Integrated Outreach Program is carried out from PHC Level II Clinics into the community.

(ii) Secondary care

The district health system covers a population of 25,000-40,000. It is the first provider of secondary care with a focus on maternal and child health. It has two levels: Health Centers that provide 24-hour services including laboratory and in-patient care and District Hospitals with higher clinical capacity, including emergency surgery and Comprehensive Emergency Obstetric and Neonatal Care.

The County Health System provides expanded services within the secondary level of care. It consists of County Hospitals which receive referrals from the Community and District Health Systems. The County Hospital provides general surgery, pediatrics, general medicine, obstetrics and gynecologic services. It should have 100 or more beds with an intensive care unit, a laboratory and basic radiology services.

(iii) Tertiary care

The National Health System is the main provider of tertiary level care.

It consists of two types of hospitals:

- Regional Hospitals which serve a catchment area of 3-5 counties and receive referrals from County Hospitals. Each Regional Hospital will have a bed capacity of 100 or more.
- John F. Kennedy Medical Center (JFKMC) which is the specialized and teaching hospital with physicians, sub-specialists and allied health professionals.

The Essential Package of Health Services (EPHS) provides for a minimum staffing of 1 and maximum of 2 ophthalmologists at County Hospitals and 3-4 ophthalmologists at referral county hospitals. It does not provide for other eye care workers.

1.1.2.2 Health status of the people of Liberia

According to the Demographic and Health Survey (2019-2020), life expectancy at birth for women in Liberia is about 65.5 years, while life expectancy at birth for men is about 62.7 years. The under-5 mortality rate is 93 deaths per 1,000 live births in the 5 years preceding the 2019/20 DHS, while child mortality is 33 deaths per 1,000 live births and infant mortality is 63 deaths per 1,000 live births. Fifty-one percent of children age 12-23 months received all basic vaccinations. The maternal mortality ratio (MMR) per 100,000 live births is 742. Twenty-three percent of the households had hand washing facilities with soap and water. The current health policy (2022-2032), in a bid to improve health indices, especially MMR--continues to strengthen the community level of the health system and to further decentralize health services to the counties.

1.2 Purpose of the policy

This policy document aims at providing a multi-sectorial framework through which eye health can be made universally accessible in Liberia. Its intention is to raise the profile of eye health as a strategy in poverty reduction and integrate eye care into universal health coverage.

1.3 Scope of the policy

The policy provides direction for cohesion of eye health services that are integrated into the National Health System. It provides for preventive/promotive, screening, examination, curative, and rehabilitative eye care services. Equally important, the policy addresses the contribution to eye health by the education and social welfare sectors.

1.4 Policy development process

The development of this National Eye Health Policy was led by the Ministry of Health through the Department of Policy, Planning and Monitoring and Evaluation and the National Eye Health Program. A technical committee was set up supervised by the Assistant Minister for the Division of Preventive Services and chaired by the National Eye Health Program Manager. Members of the technical committee included key eye health development partners, service providers including ophthalmologists, cataract surgeons, ophthalmic nurses and optometrists. Other stakeholders included the special needs education program manager, school health program manager and representatives of the Blind. The technical committee set up a core team of five people who included the eye health program manager, two ophthalmologists, an optometrist, and one county health officer. The core team developed terms of reference for a consultant who was hired to facilitate the policy drafting process and write out the policy document.

The following series of steps were taken:

1. The consultant carried out an extensive document review that covered global health policies, WHO resolutions, Liberia's development aspirations and strategies including previous and current health policies and strategies.
2. The consultant conducted interviews with program managers in Ministry of Health and focal persons for special needs education and school health program in the Ministry of Education. The interviews included the eye health team and country health team of Bong County and a tour of the regional referral eye department and two level-II Health Centers.
3. The consultant conducted secondary analysis of data on eye conditions from DHIS2 and from the Comprehensive Eye Health Project funded by Sightsavers.
4. The information from the interviews, observations and secondary data analysis was developed into a situation analysis paper.
5. Stakeholders were invited to a strategic planning meeting where the situation analysis was presented and discussed. The stakeholders were divided into thematic working groups based on the health system building blocks. The groups discussed and built consensus on the most cost-effective and relevant policy objectives and interventions that would ensure all people of Liberia have access to preventive, promotive, curative, and rehabilitative eye care services.
6. The consultant developed the draft policy document which went through several reviews by the technical committee and the Director of Policy and Planning.
7. The fourth draft was sent to stakeholders and comments incorporated.

8. The final draft was presented to Senior Management Committee for validation. Comments from the validation were incorporated and the final draft endorsed for implementation by the Top Management of MOH.

The review and planning process led to the development of two key national health sector documents on eye health: The 10-year eye health policy and the 5-year Eye Health Strategic Plan.

2.0 Situation analysis

2.1 Eye health status in Liberia

2.1.1 Visual impairment and blindness

Visual impairment and blindness remain a major public health burden in Liberia. The 2012 Rapid Assessment of Avoidable Blindness (RAAB)^{ix}, shows the prevalence of blindness being associated with increasing age, ranging from 0.7 percent to 11.7 percent between ages 50-54 and 80 years above respectively. Cataract accounted for 60.4 percent of blindness, while posterior segment pathologies accounted for 27.8 percent and over half (16%) of the posterior segment problems was attributed to glaucoma. Surgical complications accounted for 4.2 percent of blindness followed by non-trachomatous corneal opacities (3.5%), and uncorrected aphakia (2.8%).

A secondary analysis of health data from the District Health Information Service (DHIS2) from 2017 to 2021, provides a national profile of eye conditions. Given weaknesses in health facility reporting of eye conditions within DHIS2, it is expected that this data underestimates the number of cases. Strengthening reporting is a priority under this policy.

Table 1: Eye conditions in 2021 (DHIS2)

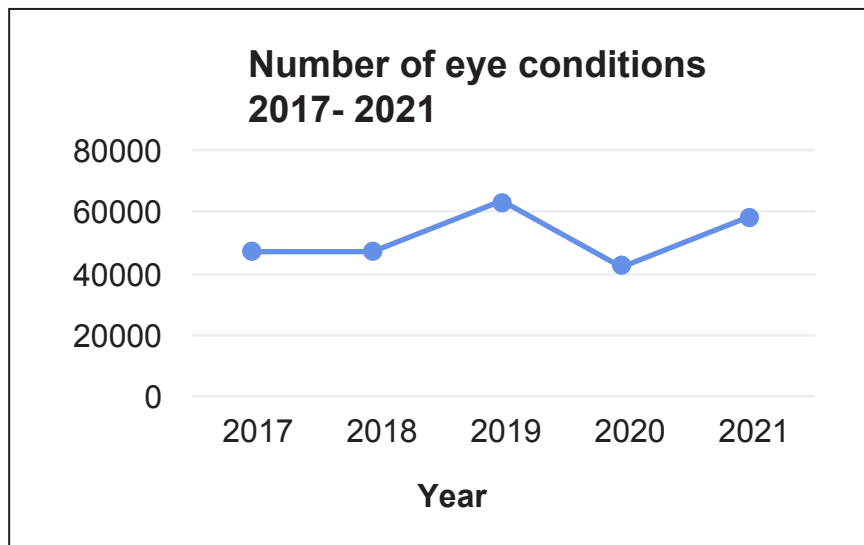
	Eye health conditions	National total 2021	% of all conditions	% of visual impairing conditions (n=19540) (#1-4)
1	Cataract (new cases)	6,437	14.0	32.9
2	Glaucoma (new cases)	5,267	11.4	27.0
3	Eye trauma (new cases)	4,288	9.3	21.9
4	Refractive error (new cases)	3,548	7.7	18.2
5	Conjunctivitis (new cases)	13,076	28.4	66.9
6	Other eye conditions (new cases) ¹	13,448	29.2	68.8?
	Total	46,064	100.0	

Conjunctivitis and other eye conditions were approximately half of the eye conditions seen in 2021. The most common blinding condition is cataract, which is 14% of all eye conditions and 33% of visual impairment.

¹ It is important to note that 'other eye conditions could fall under the definitive diagnosis; but because eye health data was a recent addition to DHIS platform without investment in training, errors could contribute to the high number of 'other eye conditions'.

Eye conditions presenting in outpatient departments between 2017 and 2021 have increased by 23%, probably due to greater access to eye health services. The graph below shows the trend of the eye conditions over the five-year period.

Figure 1: Number of reported eye conditions 2017-2021 (Source DHIS2)

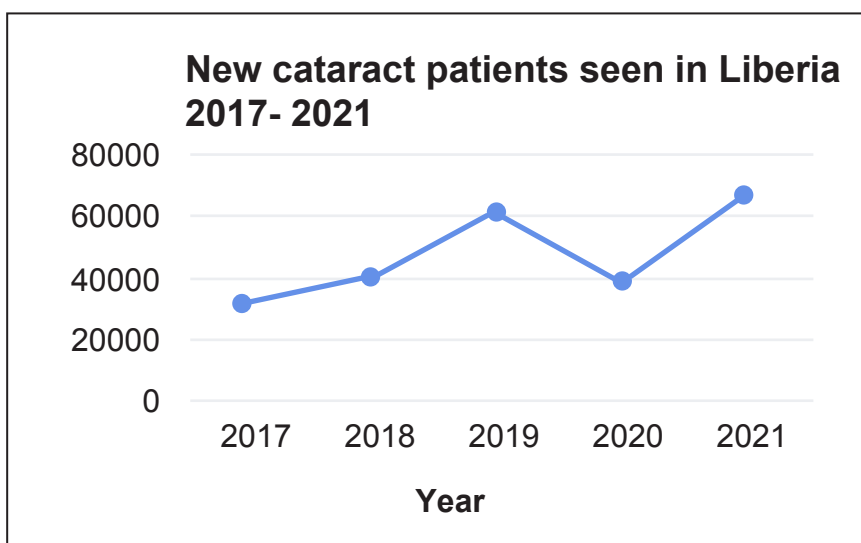


The beginning of a possible exponential rise in numbers was interrupted by the Covid 19 epidemic which affected service delivery. The bounce-back in 2021 shows a rapid recovery, probably due to high demand for services or greater reach by the eye care service.

2.1.2 Cataract and cataract surgeries

In 2021 6,437 new cataract patients were identified of whom one third was from JFK LEC and one fifth contributed jointly by Redemption Hospital and New Sight Eye Center. The trend of new cataracts identified in the country between 2017 and 2021 is shown in the graph below.

Figure 2: New cataract patients in Liberia 2017 - 2021²

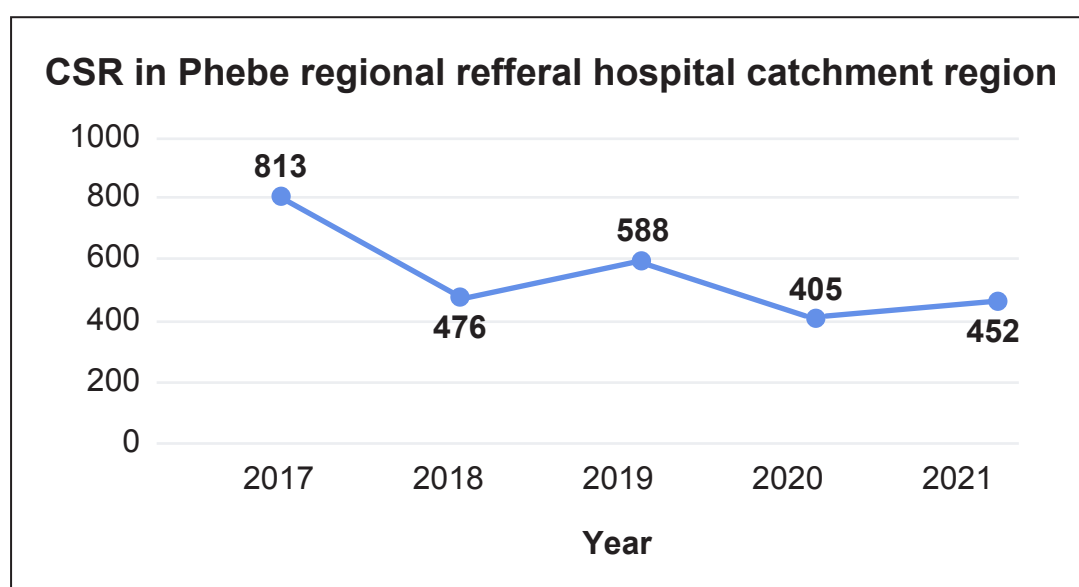


The Covid 19 lockdown changed an upward trajectory which may have resumed in 2021.

Cataract surgeries are one of the output indicators of eye health services. Cataract Surgical Rate (CSR) has been added to the 28 SDG 3 indicators and is an important outcome indicator of eye care service delivery. Currently only 6 out of 15 counties are covered by cataract surgery services. Findings from the 2022 Harmonized Health Facility Assessment (HHFA), only 1 percent of the facilities assessed (n=568) to have provided surgical services for cataract. This data represents reports from only hospitals in six of the fifteen counties.

The DHIS2 system does not collect data on eye surgeries so it is not possible to calculate the national CSR. The CSR over the past five years in the six counties, namely Bong, Grand Gedeh, River Gee, Grand Kru, Maryland, Sinoe, and in 2021 Nimba is shown in the graph below. These counties were supported by a Non-Governmental Organization (NGO) and therefore had a functioning secondary eye health facility with either an ophthalmologist or cataract surgeon and optometry technicians. The referral hospital supports an integrated community health service which provides primary eye care to the community.

Figure 3: CSR in Bong regional hospital, its catchment and outreach counties³



The CSR shows a downward trend between 2017 and 2021 despite the increasing number of cataract operations from 806 in 2017 to 2,149 in 2021. Similar to OPD, new eye patients in Fig 2 and new cataract patients in Fig 3, CSR shows a rise in 2019 and a fall in 2020 due to the Covid 19 epidemic. The dip in CSR in 2018 is due to a sudden shortage of ophthalmologists caused by maturation of projects.

2.1.3 Ebola Virus Disease uveitis

A cohort of survivors of the Ebola Virus Disease (EVD)^x was followed up in an eye clinic in Eternal Love Winning Africa (ELWA) Hospital, and it was found that out of 96 patients, 21 developed an EVD-associated uveitis, and 3 patients developed an EVD-associated optic neuropathy. Visual acuity was blind (VA >20/400) in 38.5% of eyes with uveitis. The study concluded that survivors of EVD are at risk for uveitis, which may lead to secondary structural complications, visual impairment, and blindness.

² Source: DHIS II, Health Information System Unit, MOH accessed April 2022

³ Source: Cataract surgeries from Sightsavers Country Office, Liberia. Denominator, Country population from Health Information System Unit, MOH.

2.1.4 Refractive errors

According to DHIS2 data, only 3,548 new cases of refractive errors were reported in the country in 2021. This was a 45% drop from the 2019 pre-Covid 5,322 cases. A 2022 retrospective study on school screening^{xi} found a prevalence of refractive errors (among children with the data) of 1.9% (16/823) and a prevalence of Uncorrected Refractive Errors of 0.4% (3/823). Other identified conditions were functional low vision (3/24), corneal opacity (1/24), optic nerve–related conditions (2/24), pterygium (1/24) and cataract (2/24).

2.2 Eye health services in Liberia

2.2.1 Service delivery

2.2.1.1 Tertiary level

Liberia eye health service is characterised by a well-established national tertiary referral eye center at JFKMC; however, the services are weaker in lower health facilities. The Liberia Eye Center at JFK is a partnership between the GoL and L V Prasad Eye Institute (LVPEI) based in India. It provides specialised ophthalmology services including pediatric ophthalmology, corneal transplant and laser therapy for diabetic retinopathy. Visiting ophthalmologists from West Africa and India provide additional specialised services. The LEC at JFK is a training facility for ophthalmologists of the Department of Ophthalmology at Liberia College of Physicians and Surgeons (LCPS). The total of four (4) ophthalmologists has already graduated while others are still in training.

Only two out of the five regional hospitals; Phebe Hospital in Bong County and Redemption Hospital in Montserrado have services provided by an ophthalmologist. Optometry services are provided by mid-level cadres, the Optometry Technician (OT) or Vision Technician (VT)⁴.

2.2.1.2 Secondary level

Like many Sub-Saharan African Countries, secondary eye services are provided by mid-level cadres including OTs/VT, Cataract Surgeons (CS) and Ophthalmic Nurses (CN). Currently most referral hospitals offer secondary care provided by visiting ophthalmologists who conduct scheduled surgery. Availability of tertiary and secondary eye health is summarised in Table 2 Appendix I.

2.2.1.3 Primary level

Primary eye care is provided by frontline physician assistants, nurses and trained community health personnel, including Community Health Assistants (CHA) and Community Health Promoters. In a few NGO-supported counties, frontline clinicians have received in-service training in basic eye care. CHAs and CHPs are trained in screening, identification, referral, providing advice on eye conditions and preventive community health education.

⁴ The optometry technician is a West African trained cadre while the Vision Technician, though trained locally the concept and curriculum is from India. Their training content overlaps; the main exception is the Vision Technician is able to carry out a funduscopy.

2.2.1.4 School eye health

School eye health is part of primary health care. With support from NGOs, 2,700 teachers from Bong, Grand Kru, Margibi, Maryland, Montserrado and Sinoe counties were trained to screen school children. Ninety-four district education and health officers were trained to provide training and supervision to teachers. OTs provided referral services and were also trained to supervise the school screening. In this screening model, trained teachers carried out screening and referred children with suspected vision problems to a team of eye care practitioners, in this case OTs who travel to schools, examine the identified children and provide ready-made reading glasses on the spot or order and deliver custom-made (usually high-powered) glasses at no cost to the children and their families. Vision screening is not a diagnostic test; its purpose is to identify potential vision problems and refer suspected cases for further examination by an eye care practitioner, in this case the OT. The teachers' quality of screening compared with a gold standard was found to be excellent. School screening is noted to be cost effective for the health system, schools and parents of children. It facilitates learning and greatly improves the current and futures lives of children with visual impairments.

2.2.1.5 Distribution of eye care services

Table 2 (Appendix I) shows the distribution of secondary and tertiary eye care workers and, by extension, eye care service delivery. The table also shows the current Regional Hospitals with a star next to the name of the county that hosts the hospital. In addition, the table shows the catchment counties served by the different Regional Referral Hospital shown by strips of different colours.

Some counties have fewer than 2 eye care workers and this is reflected in very low recorded Uncorrected Refractive Error (URE). Only three of the 15 counties have secondary public eye care services. The most marginalised counties are Bomi, Sinoe, Grand Cape Mount, Gbarpolu, Grand Bassa, River Gee and Lofa.

Only Montserrado, Nimba and Bong RRH have a fair mix of eye care workers and this is reflected in the high number of URE seen. Another observation is the high dependence on NGO/FBO to deliver eye care. This may limit access due to user fees or vertical patchy NGO-run projects.

Most eye care services are provided at referral or other hospitals which may affect access. NGO-supported projects have started community engagement and education to raise demand for eye care and to increase utilisation of available services. Out reaches organised with the community and country leaders have been especially successful in increasing absorption of eye care services. Eye care has hitherto concentrated on treatment. In response to prevailing national and global policies and low access to treatment centers, there is need to shift focus to preventive/promotive measures and provide a package of basic eye services at community level.

2.2.1.6 Rehabilitation services

Rehabilitation for people with low vision or irreversibly blind is grossly underdeveloped. People with low vision can only be assessed by private providers (optometrists) who are mainly in the capital city. Accessing low vision devices is only available at JFK LEC where the devices are ordered and when a prescription is made. There is no formal arrangement even in private practice for training in orientation and mobility. A child with low vision or who is blind will miss education opportunities and remain in poverty. Adults who become blind reduce family labour, and hence productivity, and often a child drops out of school to become a guide for a father or grandfather. This gap is not easily apparent because of the Blind and those with low vision are voiceless, poor and face discrimination.

2.2.1.7 Eye health assistive devices

Eye Health Assistive devices include spectacles, low vision aids, ICT assisted technology and white canes. Assistive devices are not listed among the essential health services and are therefore provided through NGOs or the private sector. Access to glasses is limited to the majority of the population and access to other devices for the visually impaired virtually non-existent. Most people who require them resort to using guides or remain at home, thus missing out on education and employment. Projects by New Sight have deployed community health promoters (CHP) to screen and distribute ready-made readers and refer others through the Community Health Services Supervisor (CHSS) to the OT for definitive vision assessment. The Ministry of Health has also piloted the provision of eye screening, reading glasses, and referrals within its existing Community Health Assistant program; based on these successes, the Ministry of Health then formally integrated this approach into its National Community Health Services Policy (2021–2030) and national scale-up plans for Community Health Assistants and Community Health Promoters.

Persons with low vision, especially children, are referred to JFK LEC where they are assessed and low vision devices are ordered from China or South Africa. White canes are imported or donated through the National Association of Persons with Disabilities. Orientation and mobility training for the blind is not accessible except for a few children who manage to enrol in one of the five schools that provide education for the Blind. A few Blind people train the newly Blind on a private basis.

The MOH has listed priority assistive devices and is beginning to train local artisans and technicians in their production. White canes are included in this list; however, no discussion on production has taken place. The eye health policy could open production channels through the JFKMC orthopaedic workshop. Its proximity to the Liberia Eye Center and availability of equipment makes it ideal for production of locally made white canes.

Rehabilitation is often funded through the patient's pocket or by NGOs. This National Eye Health Policy could enable the GoL to produce locally made assistive devices and mobilize mass importation of devices, which would lower the cost to the user through bulk purchase.

2.2.1.8 Referral system

An effective referral system ensures a close relationship between all levels of the health system and helps to ensure people receive the best possible care closest to home. It also assists in making cost-effective use of hospitals and primary health care services. Primary level health care needs to be supported with accessible quality secondary and tertiary care. Communication between levels of care and between health workers and patients completes the referral chain. Transport is an important factor which in Liberia is borne by the patient. For eye health in particular, it is important that the higher levels ensure the eye care worker or community health personnel, including teachers, receive feedback for better monitoring and continuity of the intervention. The eye care service referral system is functional in counties with ophthalmologist and ophthalmic personnel.

The challenges facing referral include:

- Cost of referral. The family may not have transport money, they may not afford the consultation fee in private and faith-based institutions. They may not afford medicines consistently (for example those with glaucoma) or the recommended surgical procedures. NGOs have attempted to ease the cost of referral by providing outreach services and waiving the consultation fee for needy patients.
- Lack of Eye Care Service Delivery at secondary level. This is a critical gap in the referral system which limits access.
- Limited rehabilitation especially those with low vision or are Blind.

- Absence of linkages between the health sector and the social development and education sectors at district, county and national service delivery levels. This affects horizontal referral between service providers in different sectors.

The gaps in referral are reflected in the drop in CSC from 90%⁵ in 2017 to 35% in 2021 in the six counties for which Phoebe Regional Referral hospital provides secondary eye care. As community services were strengthened and many people with cataracts identified; over time proportionately fewer patients accessed cataract surgery. Horizontal referral between eye care workers and social workers/teachers is minimal. This policy needs to address the gaps in the referral system, most importantly not as an eye health separate referral but as part of the mainstream MOH referral system.

2.2.1.9 Integration of eye health care in health services

Liberia eye health service delivery is dependent on donors and development partners. Although the Government is the main employer of health workers and for most, pays their salary, the remaining eye health components are supplied by donors. The partners funding activities are often under pressure to deliver on outputs. In response, GoL eye health workers tend to have allegiance with the funder and neglect to operate within the context of the health facility. The result is a vertical eye health program, which is not sustainable, and eye health workers who are not engaged with the administration of the health facility. Eye health needs to be fully integrated in the health system from the national program office, the national referral facility and at every level of care. This will raise the profile of eye health in planning, implementation and monitoring as an integral part of general health care. Integration may not address all the needs of people with visual impairments since the GoL's focus is on reducing mortality, but it provides for cohesion, better referral within health facilities and sustainability.

2.2.2 Human resource for eye health

Liberia has an adequate variety of eye care cadres. These include ophthalmologists, optometrists, cataract surgeons, ophthalmic nurses, optometry technicians, vision technicians and opticians. The mid-level cadres have been developed to meet a gap caused by an inadequate number of professionals (ophthalmologist and optometrists). The mid-level eye care workers, increase access to eye services, especially for populations living in rural areas. They also increase efficiency of service delivery because they are less expensive to establish and they provide basic and some secondary care so that the ophthalmologist's time and skill is maximally utilised on difficult/complicated patients. It is recommended that for every ophthalmologist there should be five allied/nurse mid-level workers.

WHO/IAPB recommends a ratio of eye care workers for each cadre per population. Table 6 (Appendix II) presents the current and future ratio per population of eye care workers. According to this table, if the WHO/IAPB ratio is taken into consideration; the health sector currently has a gap of nine Ophthalmologists, 19 Optometrists, 36 Cataract Surgeons, 20 Ophthalmic Nurses, and 31 Optometry Technicians /Vision Technicians. There is an urgent need to fill this gap for the improved health and wellbeing of the people of Liberia and the prosperity of the country. The available eye care workers are not evenly distributed. The effect of inequitable distribution is already discussed under service delivery in section 2.2.1.5. The mid-level eye care workers are committed to providing care, however; they are demotivated due to lack of career growth, low salary and inadequate supervision. With the exception of ophthalmologists, the eye care workers have not attended continuing medical education session unless it is in-service training organised by NGOs. These woes are not unique to eye health but cut across the health sector; nonetheless

⁵ Numerator from Sightsavers project data bank and denominator from DHIS II.

the pinch is felt deeper by eye health workers because they are few in number and experience professional isolation.

The isolation of eye care workers may have been exacerbated by development partners' vertical support, including supplies, funds for outreach and top-up of salary. The dependency on donors and self-sufficiency of the eye units gradually shifts eye health workers from the rest of hospital services. Just as there is need to further integrate eye health service in the health system, eye care workers should pro-actively be mainstreamed in general HRH developments. They need to participate in health facility planning, in-service training, supervision and where applicable be on general emergency call schedules.

2.2.3 Infrastructure, equipment, medicines and consumables

The investment of the health sector has been, and still is, focused on reducing maternal and child mortality. Provision of equipment and medicines is therefore geared to obstetric emergency and survival of the new-born. Where this overlaps with eye health needs, for example items such as gauze, cotton wool and antiseptic, the hospital supplies the eye unit. Apart from basic topical antibiotic eye medicine, most of the rest of the eye equipment and supplies are provided by development partners. Several initiatives, through drug revolving funds or payment for service in Faith-based and NGO facilities, have presented the opportunity for ploughing back fees collected into procurement of supplies. Advocacy is required for deepening the presence of eye health at all levels of primary, secondary and tertiary care as specified in the new Essential Package of Health Services. Mechanisms need to be identified firstly to include eye health supplies on the essential lists for the different levels and, secondly to ensure the MOH supply chain includes diagnostics, medicines and supplies unique to eye health.

Advances in health digital technologies have revolutionised care, including ophthalmology. Digital technology is applicable at the community level to screen, supports management of patients through remote consultations and makes complex procedures easier to deliver in low-income settings. Digital technology, such as using smart phones for eye health and complex diagnostic ICT equipment, has not penetrated the county level eye services. Availability of such technology could increase service efficiency and transfer some diagnostic procedures to lower-level health cadres.

2.2.4 Management information system

The MOH HMIS rolled out the DHIS2 platform on which a few eye health indicators were collected. The frontline workers and data collectors were not trained in eye health data collection. The dataset provides an overview of the national burden of eye disease. It showed a similar trend in new eye conditions (Figure 2) as the Sightsavers quality data used to calculate CSR (Figure 3). The DHIS2 data also revealed the unequal distribution of eye health service delivery. It also revealed a practice by eye health workers of collecting data and submitting it to development partners without entering it in the hospital registry.

The data from the MOH and NGO management information systems is not analysed regularly for output and outcome indicators. None of the data sets were used to analyse key eye global outcome indicators such as CSR, CSC and Refractive Error Coverage. The JFK Liberia Eye Center uses the Eyesmart application to collect data and uses the data to prepare annual and research reports.

The different data sets used by NGOs and MOH are not linked. A policy on management information systems for eye health shall provide a framework to avoid proliferation of data sets which do not speak to each other. WHO passed a resolution adopting cataract surgical coverage and refracted error coverage as indicators to measure universal eye health coverage. The MOH current information system is neither able to provide information on these indicators nor does it have a baseline from which to measure progress. Thus, there is an urgent need to add the required indicators on the MOH disease monitoring platform and conduct periodic RAABs.

2.2.5 Eye health financing

Eye health programs financing is heavily donor dependent. Whereas the health workers in public health facilities are paid by GoL and infrastructure belongs to Government, eye health service delivery is funded by development partners through short-term projects that do not have national coverage. This contributes to inconsistent delivery of eye care, varying packages of care and patchy, vertical coverage. The concern of donor-driven service delivery affects other health programs as well. However, like the national health expenditure, eye health is largely financed through out of pocket payment mainly in private health facilities. The current National Health Policy and Health Financing Strategy are proposing several financing mechanisms for consistent, universal and sustainable health coverage. The National Eye Health Unit with its development partners has participated in MOH financing pilots such as the Revolving Drug Fund in Bong, community fund pooling by Local Government administration and fee for service for well-off patients which subsidises the poor at JFK Liberia Eye Center. A policy statement on eye health financing will provide guidance for eye health managers on resource mobilisation and advise development partners and service providers on rationalising utilisation of funds, with specific targets on Government eye care priorities. Eye health should be perceived and applied as an integral part of other health services; therefore, the mechanisms used for health financing should include, and apply to, eye health.

2.2.6 Leadership, governance and coordination

The MOH has established structures for leadership, coordination and delivery of a cohesive health service. The health system is decentralised at the county level and the new National Health Plan aims at deepening local ownership and decision making. Eye health is strategically positioned in MOH where the director of the National Eye Health Unit reports to the Assistant Minister for Preventive Services. At this position s/he can leverage benefits, including partnerships from other health programs and units.

The decentralisation policy provides for 'County Health Teams' and 'District Health Teams' which have great influence on health service delivery at their level of operation. However, there is no representation of eye health on these teams to raise awareness among administrators and politicians about eye health, to facilitate integration of eye health in general health care, to coordinate eye care development partners within the county and to mobilise the community for eye health.

In order for eye health leadership to take advantage of the available governance and coordination structures, the tertiary and mid-level eye care providers need to be informed about the availability of this coordination system and how they can use it to advance eye care within their area of jurisdiction.

The GoL MOH governance system is a critical vehicle for:

- Deepening integration of eye health into the health system;
- Coordinating partnerships for delivery of a unified eye plan;
- Tapping into available opportunities from other programs; and
- Participating meaningfully on County and District Health Teams while raising the profile of eye health within health facilities.

For over ten years, the eye health program has not had a national coordinating committee to coordinate partners and service providers to deliver one unified eye health strategy.

A coordinating committee that spans preventive, promotive, treatment and rehabilitative eye health, has intersectoral connections; and is keen on learning and utilisation of monitoring and evaluation should be instituted.

2.2.7 Implication for policy

The eye health service is established at the national level but is extremely limited in both geographical scope and reach into the community, with exception of pockets of good access facilitated by NGOs. These NGO projects form important learning and pilots of what works. For example, school eye health projects have succeeded in using teachers to screen, and to refer within the GoL health system. The Ministry of Health Community Eye Health pilot which trained existing CHAs to provide basic eye health services has also succeeded in accelerating universal access to screening, provision of reading glasses and successful referral in targeted catchments. The common blinding conditions are addressed especially by the Liberia Eye Center and two regional hospitals. The extremely low access to visual assistive technology and rehabilitation are critical issues that this policy must address. Implementation of the policy therefore must commit to paying as much attention to treatment as to rehabilitation.

Data for eye health is limited, information management system is fragmented, and inadequately coordinated. There is a parallel management information system between the public and private sector as well as between NGOs. These hinder data generation for key indicators to facilitate informed policy decisions. The last RAAB was conducted in 2012. The National Health Management Information System is functional but collects extremely few indicators which cannot guide informed planning processes. The information systems implemented by NGOs operate in isolation and do not cover the nation. Donor dependency skews service delivery to donor-funded activities at the expense of services less attractive to donors. Vertical projects that deliver quick outputs but undermine long-term benefits, such as integration, limit sustainability of eye health services. The policy needs to address these gaps, prioritising interventions that will result in sustainability of eye service in Liberia.

2.2.8 Emerging policy priorities

Shift to universal comprehensive health care at community level: The National Health Policy, SDG and the resolutions by the World Health Assembly all point to universal healthcare close to or within communities and cover preventive, promotive, treatment, rehabilitative and palliative care. Rehabilitative service is the least developed among the five categories of services.

Integration of eye health services in general health care: Partially vertical and vertical health delivery that meets the agenda of donors is not sustainable and is not equitably distributed. WHO, IAPB and MOH call for integrated service delivery, where eye health is included in one, unified health plan for greater effectiveness, efficiency and sustainability.

Elevate eye health: Good vision is one of the factors that contribute to development of the individual, their family and community while poor vision and blindness are risk factors for perpetual generational poverty. Eye health therefore needs to be added to the list of priority programs and the SDG 3 indicator of CSR included in core national health indicators.

Coordination of effort for greater impact: Eye health cuts across several health delivery programs and all supportive programs. It intersects with other sectors, especially education and social development. The program has several partners and donors, each with different mandates. Hitherto, coordination has been responsive to donor-supported projects. There is need to strengthen coordination that brings all players together for a unified, multi-program, multi-sectoral and multi-level eye health service.

Sustainable eye health financing: The health sector is seeking new funding strategies that will increase resources at the same time protect the poor and provide them with minimum package of quality care. Eye care managers, service providers and development partners are equally aware that current funding levels are too low to deliver basic eye health to all people in Liberia. Rather than exploring sustainability separately; the eye health fraternity should support the MOH so that all health financing solutions include eye health.

Equitable eye health service delivery: Eye health secondary care (provided by an ophthalmologist/CS) is available only in 3 of the 15 counties. Outreach has increased access but is expensive and does not provide a consistent service. Especially vulnerable are Bomi, Sinoe, Grand Cape Mount, Gbarpolu, Grand Bassa, River Gee and Lofa. This policy needs to address the inequity in delivery of eye health services.

Information and research: Providing eye care without looking back and using objective global indicators to measure progress is wasteful and undermines effectiveness. Three issues emerge: firstly, the need to include eye health indicators (not just treatment but preventive and rehabilitative) into current and emerging health information systems. Secondly, the MOH and development partners need to develop a program monitoring framework that collects input and process/activity data. Finally, research and data analysis should be done and pro-actively used for planning eye care interventions, information sharing and resource allocation.

3.0 Policy foundation

3.1 Mission

To expand the coverage and improve the quality of eye health services for the attainment of universal eye health coverage in Liberia.

3.2 Vision

National Eye Health Vision: The population of Liberia to enjoy the highest attainable level of vision, good quality eye health and social inclusion for equitable growth and sustainable development of Liberia.

3.3 Goal

To reduce the burden of eye diseases through comprehensive and good quality eye health service that is available, accessible, affordable, and acceptable to contribute to the overall health and wellbeing of all people in Liberia.

3.4 Objectives

1. To improve access to quality, inclusive and equitable eye health care that is integrated in the health service delivery at all levels.
2. To increase the number of motivated and skilled Human Resource for eye Health that is equitably distributed at primary, secondary and tertiary levels in all counties for the effective delivery of comprehensive, and high-quality eye care.
3. To increase access to eye care infrastructure, functional equipment, diagnostic technologies, essential eye health medicines, and assistive devices at all levels of care.
4. To strengthen Management Information Systems, and promote research for evidence-based planning, resource mobilisation and advocacy for improved quality and efficiency of eye health services.
5. To transform eye health financing by integrating eye health in all Ministry of Health funding frameworks and identifying other eye health financing mechanisms.
6. To strengthen leadership, governance, coordination and effective partnerships for a cohesive, and integrated eye health services at community, district, county and national levels.

3.5 Guiding principles

The following principles and values shall guide policy interpretation and implementation. They are drawn from the NHP 2022-2032, with additional principles that are critical for eye health.

Health as a human right should be available to all without sinking the marginalised into poverty.

Equity for greater access and utilisation by communities especially those with low health service coverage.

Quality for all implies effective, safe, timely, equitable, integrated and efficient eye health service that is universally available.

Patient-centered care which is tailored to peoples' needs and will ensure greater reach and wider coverage.

Leave no one behind to ensure the highest level of inclusion and utilisation of eye health services by all people within communities, with focus on disability, gender, age and rural and urban poor.

Pro-poor responsiveness for greater penetration of eye care services among the population who are most in need, especially the rural and urban poor.

Accountability and transparency which builds trust for various funding mechanisms and partners. It also ensures efficiency.

Inclusive services where beneficiaries and marginalised people participate in decision making, activity implementation and evaluation for greater ownership and relevance.

Country owned and country led eye health care that is aligned to national priorities.

Evidence-based and result-oriented service for greater effectiveness and impact.

4.0 Policy orientation

4.1 Policy shift

This policy aims at four shifts in eye health service provision:

Integration of eye health in Liberia's delivery of Universal Health Coverage (UHC). The policy provides for each eye health system building block to be integrated into the respective national health system. This will ensure greater access to eye health, wider coverage of quality care and sustainability.

Expanding care from the current tertiary and secondary care to the primary level for greater coverage of services that are: patient-centered, eye health promotion, prevention of eye conditions, treatment and rehabilitation.

Promoting sustainable funding instead of the current donor-dependent service. This will entail including eye health in Liberia's health funding innovations and exploring public-private partnerships specifically for eye health.

Government-led eye health services from a fragmented often NGO-directed service. All stakeholders in eye health shall be guided by this policy. Eye health service provision will be coordinated by Government through National and County eye health committees and County Health Teams.

4.2 Policy statement

4.2.1 Quality accessible service delivery

Outcome: Quality and inclusive eye health services are available and integrated within the existing health system at all levels.

Rationale: Eye health service delivery is not evenly available in the country with the South East and other remote areas being particularly marginalised. The service is fragmented, a consequence of responding to development partners and donors with varied interests and mandates. The response to donors rather than to a national priority has deepened dependency on INGOs and resulted in a vertical program that is not fully integrated into the National Health Services. These services are mainly curative-focused with limited quality assurance and evidence-based interventions.

The primary health centers need to provide preventive eye care services which are community-centered through health education and promotion. The existing services at the secondary level facilities should focus on priority eye conditions and address the increasing number of people with avoidable blindness and visual impairment. Tertiary-level facilities should provide the required speciality and sub-speciality services and training.

The following policy statements aim at rectifying the situation and positioning eye health in mainstream health provision. In particular the policy statement aims at providing quality eye care which WHO defines as effective, safe, people-centered, timely, equitable, integrated and efficient care.

Objective: To improve access to quality, inclusive and equitable eye health care that is integrated in the health service delivery at all levels.

4.2.1.1 Integration

Eye care shall be an integral service within the health care system of Liberia from community to primary, secondary and tertiary levels of care. It shall therefore be listed by level of care in the Essential Package of Health Services (EPHS-II) and other guidelines and standards that provide for service delivery.

Health facility supervisors shall ensure eye care services are included in routine health facility services and outreach programs. The CHSS shall include eye care in outreach activities at the community level. Further, the CHSS will integrate eye care into the routine supervision of their assigned CHAs and CHPs. These supervision visits should target the full range of eye care services provided by CHAs and CHPs, including screening, provision of reading glasses, and referrals, as well as accompanying community engagement, dialogue and behaviour change activities.

4.2.1.2 Levels of service delivery

Each level of care shall provide the basic eye care package contained in the WHO Primary Eye Care Interventions (PECI)^{xii} with increasing complexity from the community to the tertiary referral level. The basic package provides preventive, promotive, curative, rehabilitative, and Palliative care.

(i) Eye care services at community level

Eye health services at the community level are a critical component of this policy. Further institutionalization of community-level eye care services will be critical for their success. This shall include but not be limited to the integration of 1) School Eye Health into the GoL's Education Sector Plan, and 2) Community Eye Health into the GoL's Community Health Policy, Strategic Plans, Essential Package of Community Health Services, and relevant SOPs, curricula, and tools.

Eye health services at community level

Cadre	Services provided
All cadres	<ul style="list-style-type: none"> Preventive and promotive health education for behavior change regarding harmful practices, hand and facial hygiene, regular eye checks, drug administration for onchocerciasis, fear of surgery and using spectacles, and occupational hazards. Awareness-raising about available community-level, outreach, and static services. Demand-generation for eye health services that are of high quality, culturally acceptable and effective. Engagement of communities to monitor eye health service delivery as part of UHC.
CHSSs	<ul style="list-style-type: none"> Supervision of CHAs and CHPs providing Community Eye Health services. Facilitation of referral and follow-up for cases identified by TTMs, CHAs and CHPs. Coordination of mass drug administration for onchocerciasis.
Midwives	<ul style="list-style-type: none"> Provide eye health outreach services and supervision targeted towards pregnant women, mothers, and new-born (as relevant). Provide immediate newborn eye examination and care. Refer when necessary.
OTs/VTs and Ophthalmic Nurses	<ul style="list-style-type: none"> Provide next-level screening for students and teachers referred via school eye health at designated community visits or, when community visits are not available, at the nearest health facility with the ophthalmic personnel. Provide ready-to-clip prescription glasses and reading glasses for students and teachers failing the screening test respectively. Refer students and teachers in need of more advanced care. Follow up on referrals (including students, teachers and community members) in coordination with schools, CHSSs, midwives, and CHAs/CHPs.
CHAs/CHPs	<ul style="list-style-type: none"> Eye screening for all community members. Dispensing reading glasses for presbyopia in adults about 40 years and above who fail the near vision test. Referrals for those who fail distance vision test to the nearest health facility with Primary Eye Care Worker or ophthalmic personnel. Follow up with those using glasses and other visual assistive devices. Mobilizing communities for outreach conducted by health facility staff and mass drug administration for onchocerciasis.
TTMs/TBAs	<ul style="list-style-type: none"> Provision of eye health information on vitamin A supplementation for babies, children and breast-feeding mothers. Refer all newborns to the CHAs for eye examination.
Teachers	<ul style="list-style-type: none"> Screening of students and teachers at least once per year. Refer all students and teachers who fail screening to the nearest health facility.

(ii) Eye health services at primary level

Services at primary level I and at the **District Hospital** shall include: Screening of adults for conjunctival disorders, presbyopia and cataract; screening for visual impairments at the health facility, at community and in educational institutions; screening of babies in immunisation clinics; and of all newborns including children for conjunctivitis, glaucoma, cataract and other ocular abnormalities.

Treatment at primary-level facilities shall be in line with the recommended PEC algorithms. This shall include: The management of superficial injuries and foreign bodies in the conjunctiva and eyelid and simple conjunctivitis; Preventive treatment of all newborns with tetracycline eye ointment; Dispensing reading glasses for adults and referral to the County hospitals. They shall ensure compliance by referred patients.

The primary level shall follow up clients who received orientation and mobility training. They shall deliver and reinforce behaviour change messages through various forums, follow up visual devices and refer the visually impaired to income-generating opportunities.

Trained teachers shall perform school vision screening in schools and refer children who fail the screening for refraction.

All primary-level eye health services, including school screening, shall be provided through the primary health centers/ facilities.

(iii) Eye health service at secondary level

Services at the **County hospital** shall include all the services provided by primary health facility. In addition, the County hospital shall provide health education and counselling to patients with chronic NCD such as Diabetes mellitus, glaucoma and age-related macular degeneration.

The county level eye health facilities shall provide quality cataract surgeries, management of glaucoma, diagnosis and referral of Diabetic retinopathy, express referral of babies with cataract, glaucoma or white eye, and any patient with severe eye injury.

Low vision and vision rehabilitation services shall be provided at the county eye health facilities in collaboration with relevant rehabilitation centers.

Optometrist and optometric technicians shall provide refraction services and support the community and school vision screening activities.

The County hospital shall provide refractive error certification to drivers, riders of motorcycles and machinery operators as a requirement for driving permits and machinery operation certificates in collaboration with the Ministry of Transport (see section 4.2.1.4).

Services at the **Regional hospital** shall include all the services offered by the County hospital. In addition, the regional hospital shall provide glaucoma surgery and optometry services including low vision and glazing services. Regional hospitals shall provide orientation and mobility training as well as Activities of Daily Living (ADL) training for the newly visually impaired. Outlets for white canes and locally made canes shall be at this level. The regional hospital shall provide eye health counselling services to people with chronic NCD that affect vision, cancers that involve the orbit and those with irreversible severe vision loss and blindness.

(iv) Eye health service at tertiary level

The national referral eye department at JFKMC shall continue to provide general and sub-speciality eye health services in the short and medium term, and shall focus on the provision of complex eye care services in the longer term. The tertiary center shall support the management of non-communicable chronic eye diseases such as diabetic retinopathy, glaucoma, and macular degeneration. In addition the tertiary center shall provide paediatric eye care, including but not limited to childhood cataract surgery, management of retinoblastoma and low vision.

The Liberia Eye Center (LEC), JFK and the MOH eye health program manager shall ensure that appropriate regulatory mechanisms are in place for only well-certified and trained eye health personnel to perform eye surgeries using the right infrastructure and appropriate technology in any part of the country.

4.2.1.3 Outreach-based service delivery

Outreach at every level shall be planned with the community, religious and education institutions where the outreach will be held, even when the hosting center is a health facility.

All routine outreach by the HC I & II and the district hospital shall include health information on the treatment of eye conditions, referral and the dangers of harmful traditional eye practices.

All routine outreach shall include screening for cataract and visual impairment by a trained CHA/CHV/CHP or PECW.

Outreach shall include School Eye Health (SEH).

Outreach from the County hospital to lower levels for surgical care and or other services shall be planned by the CHT, the hosting facility and the County Inspector.

All surgical outreach shall be held at a health facility.

Conditions that will be operated through outreach services include cataract, uncomplicated ocular growth, and simple lid conditions.

External teams (from outside the county or country) conducting surgical outreaches or services at county/regional referral level shall:

- Obtain relevant professional licensing from the medical council;
- Present proof to the CHO from MOH permitting them to conduct the outreach and specifications of conditions that will be treated;
- Present a letter of introduction from MOH to the County Inspector permitting the organisation to conduct the eye care service at a designated health facility; and
- The County Health Eye Team shall participate in the outreach and provide scheduled follow-up of patients for effective outcome. The follow up shall be integrated in the existing health system and processes.
- Report on the outreach shall be submitted to the County Hospital director and data entered in the DHIS2.

4.2.1.4 Drivers, riders and persons operating machinery

All drivers of all classes of vehicles and riders of motorcycles shall have their vision examined before getting or renewing their driving licences in collaboration with the Ministry of Transport.

Machinery operators shall have their vision checked annually.

The vision of drivers shall be examined by trained ophthalmic personnel who shall issue a Government Certificate stating their findings.

This service shall be provided at the County hospital level and any other facility, private or public, that employs ophthalmic personnel.

4.2.1.5 Quality control systems

All eye care personnel shall use recommended tools to monitor and improve their professional medical competencies.

Eye health professional body shall ensure they provide and enforce a regulatory framework for eye health workers to work within their competencies and abide by their professional mandate.

All eye care professionals shall undergo continuous professional development in eye health for a minimum of 50 hours annually.

Treatment guidelines and Standard Operating Procedures (SOPs) shall be developed by the relevant national authorities and reviewed in line with the changes in global standards.

All eye health services and providers shall subscribe to the MOH treatment and quality guidelines for quality of care and participate in continuous quality improvement schemes at national and international levels. Directors of Hospitals and Nurses-in-Charge shall include the eye clinic in their daily health facility inspection and in any periodic detailed inspection of wards and departments.

The National Eye Health program and Inspectorate division of the Ministry of Health shall ensure a regulatory mechanism for the conduct of surgical and screening camps/outreach to monitor patient safety and outcomes.

The Ministry of Health shall ensure the Counties domesticate this policy for quality assurance.

4.2.1.6 Inclusive eye health services

Cognisant of the social differences between men and women, girls and boys and the low access to secondary and tertiary eye care by women in Liberia, the difficulties PWDs encounter in accessing health services including the stigma and negative stereotyping, the unmet eye health needs, and the vicious cycle of poverty and disability, respecting cultural and religious norms, and noting the fear the rural communities and young children have for eye care procedures, this policy shall promote:

- Eye health services that are sensitive and responsive to gender, culture, and religious differences;
- Physically accessible eye health facilities;
- Health and support workers that show empathy for PWDs, children, rural people, and the marginalised;
- Community Eye Health and School Eye Health as drivers of more inclusive eye health services that reach the last mile and that are provided by those residing in the community; and
- Social and Behaviour Change (SBC) approaches that promote equality and non-discrimination, thereby improving access to eye health services for all individuals irrespective of their gender, age, disability, and socio-economic status in society.

4.2.1.7 Referral service

The eye health facility shall have an effective referral system that is integrated into the existing health system.

The eye health facility shall use MOH referral tools and the government shall ensure the availability of referral forms and registers in all the relevant eye health facilities.

Secondary eye health facilities shall be identified to serve as referral centers for a specific number of named primary health centers.

Follow-up after treatment is critical in eye health because many conditions are chronic and could lead to loss of vision if they are not monitored. Referral from a higher to a lower level MUST be accompanied by a referral form detailing treatment/surgery provided and follow-up interventions which the receiving eye health worker should monitor.

4.4.1.8 Service outcome and impact targets

Outcome targets

- Cataract Surgical Rate (CSR) is an SDG indicator and shall be included in the national priority list of health indicators. (DHIS2)
- Effective cataract surgery coverage (eCSC) increased by 30% in 2032 from the 2023 baseline.
- Effective refractive error coverage (eREC) increased by 40% in 2032 from the 2023 baseline.
- 100% of newly blind children, youth and adults are ADL independent.

Impact targets

- Prevalence of Blindness reduced from the 2023 baseline by 10%.
- Prevalence of visual impairment from refractive errors reduced by 30% in 2023 from the 2023 baseline.

4.2.2 Motivated, skilled human resource for eye health

Outcome: The number of motivated, skilled and equitably distributed HReH at all levels of health care and in all counties for effective delivery of comprehensive quality eye care increased.

Rationale: Health systems can only function with health workers. Improving health service coverage and realizing the right to the enjoyment of the highest attainable standard of health is dependent on their availability, equitable distribution, accessibility and acceptability, and possession of the required skills to provide quality care. The eye health service is limited in scope and coverage because eye health workers are few, inequitably distributed and dependent on NGOs for additional compensation. The few hospitals that have eye health workers have a fairly good mix of the required cadres, however, the workers are demotivated due to a lack of career paths, and low salaries, with those without NGO support inadequate equipment and other supplies to carry out their work. Of the six active ophthalmologists, only four are Liberian. The aim of this policy is to ensure an increased number of available eye health workers who are equitably distributed and are motivated by the recognition of their qualifications by the Government, providing regular supervision and in-service training.

Objective: To increase the number of motivated and skilled Human Resource for eye Health that is equitably distributed at primary, secondary and tertiary levels in all counties for the effective delivery of comprehensive, and high-quality eye care.

4.2.2.1 Increase the number and competency of eye health workers

In order to attain the WHO/IAPB recommended number of eye health workers per population (Table 3, Appendix II), and; more importantly, to meet the eye health needs of the people of Liberia within the available resources, the policy requires:

- Periodic mapping of eye health personnel to understand the gap and training needs for all staff in all the eye health facilities across the country;
- A HReH plan that feeds into the national human resource for health plan for competency-based training, resource allocation, career development plans and assigning roles and distribution of health workers to relevant health care facilities at all levels;
- The regulation and professional boundaries are enforced to ensure quality eye health delivery at all levels.
- All secondary eye health facilities shall have the required teams, including clinical and non-clinical staff for the provision of good quality eye care.

4.2.2.2 Introducing and sustaining Primary Eye Care Workers (PECWs) for efficiency and high coverage

Liberia's pro-poor agenda requires a shifting of services to the community level, especially in rural areas in a bid to lift the population out of poverty. This is also the rallying call of the SDG's 'leave no one behind'. In response to this, the policy provides for nurses and clinicians in the districts to receive additional skills in identifying, managing and referring eye conditions. The PECWs will support the delivery of community/primary and school eye services.

Nurses, Physician Assistants and Midwives shall receive training in Primary Eye Care using the WHO Primary Eye Care Tool Kit adopted for Liberia. This shall begin with the primary health care level and spread to the secondary level.

This training shall be decentralised to Counties. Each county shall have training of trainers, plan and conduct the training and provide the required supervision. Because of the high mobility of health workers through promotion, training, transfer, retirement and other reasons for attrition, training shall be organised more frequently during the first five years and at least once a year during the second half of the policy cycle. This same training shall be incorporated into the basic training of nurses, physician assistants and Midwives for sustainability.

The training manual shall be reviewed from time to time, under the leadership of MOH to cater for emerging issues and digital technology.

The approved WHO PECW training kit shall be the only recommended document for training PECWs in Liberia and shall not be modified in any form without consulting with the MOH.

4.2.2.3 Deployment of eye health workers

Eye health workers tend to aggregate in Monrovia in public, Faith-based and private for-profit facilities. The rationale for the skill mix below is for higher coverage in rural and hard-to-reach districts, with eye health service that is available and cost-effective. Newly graduated ophthalmologists are likely to be deployed in Monrovia and counties close to the capital, therefore the cadre that can be counted on to provide services is the mid-level ophthalmic personnel.

This policy proposes distribution by level of care of the different cadres for increased coverage and to optimise their different skills. Based on an estimate of 350,000 baseline population per county, which shall increase to an estimate of 400,000 by 2032, eye health workers shall be deployed as provided in the table below.

Table 2: Policy recommended deployment of eye health workers at various levels of care

Level of care	Cadres of eye health workers	Distribution	Comments
Tertiary (JFKLEC)	Ophthalmologists	6	
	Optometrists	3	
	Ophthalmic Theatre Nurses	3	
	Ophthalmic Nurses	10	
	Optometry Technicians/VT	10	
	Glazing Technicians	2	
Secondary referral hospital	Ophthalmologists	2	
	Cataract Surgeons	2	
	Optometrist	1	
	Ophthalmic Theatre Nurses	1	
	Ophthalmic Nurses	4	
	Optometry Technicians/VT	2	
	Glazing Technicians	1	

Level of care	Cadres of eye health workers	Distribution	Comments
Secondary county hospital	Ophthalmologists	1	
	Cataract Surgeons	2	
	Optometrist	0	
	Ophthalmic Theatre Nurses	1	
	Ophthalmic Nurses	2	
	Optometry Technicians/VT	2	
	Glazing Technicians	1	
	Primary Eye Care Workers	2	
District hospital/HC II	Physician Assistants	2	
	Registered Nurses	2	
	Primary Eye Care Workers	2	
HC - I	Physician Assistant	1	
	Registered Nurse	1	
	Primary Eye Care Workers	1	
Community level	Community Health Assistants		With additional training in eye health.
	Community Health Promoters		
Schools	Teachers		Teachers providing eye screening, referral and follow-up of students.

4.2.2.4 Profile of the skill-mix for effective and efficient delivery of eye health services in Liberia

Nomenclature and roles for ophthalmologists and optometrists are globally recognised and accepted. This policy describes the mid-level eye care workers who make different contributions to eye care. The nomenclature differs from country to country and, to a health service manager, their roles may seem to overlap. Liberia is part of the West African community and shall develop eye care that commensurate with the West Africa Health Region. It should be noted that the Civil Service Agency Standing Order (CSASO) of 2012 recognises only the basic training of the eye health cadres. The allied health, medical and nurses' councils recognise cadres as listed in the Civil Service Agency Standing Order, however, the councils permit ophthalmic personnel to practice their specialisation in eye health. Work-in-progress between MOH and Public Service has reclassified ON and CS as specialised nurses.

The MOH recognises the following eye care workers:

Table 3: Categories of eye care workers recognized by MOH

Name	Skills set	Nomenclature in CSASO	Nomenclature with health councils
Ophthalmologists	Lead in eye care, provide complex surgery.	Ophthalmologist	Ophthalmologist
Optometrist	Complex refraction, low vision work, refraction of children, prescription of glasses and other visual devices.	Not yet recognised, work in progress.	Optometrist
Ophthalmic Theatre Nurse	Preparation of patients, equipment for surgery, support surgery, theatre, post-operation recovery.	Specialised Nurse	Nurse
Cataract Surgeon (CS) (Physician Assistants (PA) with a 2-year Diploma in eye health.	Diagnosis, treatment in OPD, assistance in theatre in absence of ophthalmic theatre nurse, CS and simple lid surgeries and foreign bodies.	Specialised Nurse	There is no career ladder for PA. When this is developed PA who are CS may revert to specialised PA.
Ophthalmic Nurse	Manage eye health in OPD, vision screening, assist CS, an ophthalmologist in theatre.	Specialised nurse	Nurse
Optometry Technician/Vision Technician	Simple refraction and prescription of spectacles, able to glaze in absence of a glazing technician, VT able to carry our funduscopy.	Work in progress (Ophthalmic Nurse aide or Ophthalmic Technician).	Not accredited.

In the medium term, the GoL needs to recognize and develop career paths for cadres that are relevant to the country and are recognized within the West Africa Health Community.

4.2.2.5 Nomenclature for eye care providers

Aware of the critical role played by the eye health cadres in increasing eye health coverage, recognising that good vision is the foundation for poverty alleviation and noting that Liberia has to report on SDG 3 indicators including the indicator on eye health this policy recommends that the Essential package of Health Services includes comprehensive eye care at tertiary and secondary levels provided by the eye health cadres listed as:

- Ophthalmologists;
- Optometrists;
- Nurse Cataract Surgeons;
- Ophthalmic Nurses;
- Nurse-aides-optometry technicians/Vision technicians
or
- Health technicians-optometry technicians/Vision technicians.

4.2.2.6 Management of eye health workers

All eye health workers shall be integrated into the hospital and MOH human resource management systems, and structures including, but not limited to, the hospital's organogram, Civil Service Agency Standing Order, eJoint Integrated Supportive Supervision platform and the Health Management Information System.

All mid-level and tertiary eye care professionals shall be registered with the relevant professional bodies.

The regional ophthalmologist shall provide technical oversight for all eye health cadres in their catchment region. Administrative oversight shall be provided by their respective health facility.

There shall be regional and county eye care coordinators to coordinate and manage eye care activities in the regions and counties.

The regional and county eye care coordinators shall report to regional and County Health Teams and coordinate with the national eye health program in planning and implementation.

Eye health training (diploma and above) is usually an additional training and shall be recognised as such by the Civil Servants Agency Standing Order. For example, an Ophthalmic Nurse shall be recognised and designated specialised nurse with a corresponding salary increment.

Optometry Technicians shall be considered as a category of Nurse Aides until the public service approves the establishment of various health technicians.

The health sector is not static because it is constantly evolving with changing demographics and disease patterns. Any new advances within the MOH regarding HRH shall apply to HReH.

Eye health workers shall enjoy all the benefits, opportunities and motivational packages that the Government extends to its HRH.

4.2.2.7 Supervision

Supervision of eye health workers shall be by two categories of supervisors:

The medical director of the health facility shall supervise all eye health workers. This supervision may be delegated to the head of the eye department or another health worker of a similar position.

Technical supervision by senior eye health workers is usually at the next level of care. Technical supervision shall be targeted and planned so that over time, the eye health worker's skills improve. This supervision shall be integrated into the eJoint Integrated Supportive Supervision platform of the MOH.

4.2.2.8 Policy targets for HReH for public and faith-based health facilities

- Ophthalmologists per population 1:250,000.
- Optometrist 1:750,000.
- Ophthalmic nurses 1:100,000.
- Optometry technicians/VT 1:200,000.
- Ophthalmic personnel are listed in the Essential Package of Health Services.
- Every county hospital has at least three ophthalmic personnel.
- Every District Hospital, Health Center II has a Nurse/Physician assistant trained in eye health (who may be referred to as a PECW).
- All eye care personnel are supervised at least once a year.

4.2.3 Infrastructure, equipment, medical supplies and medical technologies

Outcome: Availability of accessible infrastructure, functional equipment and digital health technologies; and sustainable supply of essential eye health medicines, diagnostics and assistive devices increased at all levels.

Rationale: Adequate equipment and consumables are critical for the delivery of quality eye care at the primary, secondary and tertiary levels. Eye health equipment and consumables in the public sector are provided by donors, even though not in a strategic manner for national coverage. The supply of consumables is the most vertical component of the eye health service and therefore does not benefit from the mainstream health supply system or gain from the economy of scale of bulk purchasing. The absence of a maintenance and repair program limits access to eye care even when the human resource is available. This policy aims at integrating the supply of eye health equipment and consumables in the National Drug Service (NDS) and providing a framework for equitable distribution, maintenance and repair of equipment. The policy provides for accessible eye clinics that are integrated into existing hospitals and lower health facilities.

Objective: To increase access to eye care infrastructure, functional equipment, diagnostic technologies, essential eye health medicines, and assistive devices at all levels of care.

4.2.3.1 Adequate and accessible infrastructure

Regional and County hospitals shall have designated space for eye health as follows:

- Furnished eye unit within the hospital, with adequate space for waiting area, vision screening, examination/consulting rooms, triage area, medical records, optometry section for refractive services, theatre, and admission ward.
- All infrastructure, including bathrooms and toilets, shall be accessible for persons with disabilities and the elderly and shall have ramps, rails, and colour contrast and markings/signage for easy access and navigation; and
- The OPD shall be painted with attractive child-friendly pictures and provide appropriate clean toys.

4.2.3.2 Functional equipment at all levels of care

Eye health equipment shall be available in accordance with the equipment list in Annex 3, 4 & 5 of the WHO Package of Eye Care Interventions (PECI).⁵⁵

- All eye health equipment shall be well maintained and functional using a scheduled maintenance plan and logbooks;
- The regional and county hospital bioengineer/biotechnician or any appropriate person shall be trained in the maintenance and repair of eye health equipment;
- S/he shall provide maintenance and repair services for equipment in catchment counties of the Regional Hospital or secondary facilities;
- Government shall procure eye health equipment in accordance with this policy, taking into account the availability of skilled personnel to use it. It shall work with development partners to identify appropriate equipment for donation based on needs;
- All procured and donated equipment shall be inspected for quality and functionality. Where appropriate, it shall be delivered through the national procurement and supply chain system as part of the integration process;
- There shall be capacity building on the use of all new technology procured by the government or donors; and
- An annual inventory of eye health equipment shall be conducted and shall be integrated with the hospital's annual inventory.

4.2.3.3 Sustainable supply of medicines, diagnostics and consumables

The Government of Liberia is ultimately responsible for the procurement and supply of quality diagnostics, eye medicines, spectacles, low vision and assistive devices and other consumables/supplies.

To ensure a sustainable supply of these:

- Eye health supply chain shall be integrated into the existing national supply chain and initiatives that ensure a sustainable supply of safe medicines, quality diagnostics and other supplies from the national to community level;
- Eye health supplies, as listed in the WHO PECI, shall be included and regularly reviewed in the MOH essential list of medicines and supplies;
- Eye health facilities at secondary and tertiary levels shall ensure that eye health medicines, spectacles, lenses, diagnostics and consumables are available in the hospital pharmacy at a fee that is in accordance with the county and national cost recovery program. This will ensure the patients receive the correct medicines and other supplies at the point of care;

- Depending on the health financing policy that the GoL will endorse, the cost of medicines, spectacles, and other consumables may be included in user-fee schemes for 'pooling resources for health care';
- Government shall make its Central Medical Store available to development partners to store donated or purchased eye health supplies and medicines including non-medical items; and
- Donated medicines and other supplies shall be received and stored by the hospital except if they are for immediate use by a surgical team, or if the store is not fit for storage of the eye medicines.

In either case, the consignment shall be received and released to the eye department.

4.2.3.4 Safety of patients and eye health workers

- Eye health wastes shall be disposed of in accordance with global best practices as guided by the MOH;
- Eye health equipment shall be used in accordance with hospital safety provisions and guidelines;
- The in charge of the eye unit/department shall periodically inspect eye health workers and support staff to ensure safety standards are maintained; and
- The eye department shall abide by all relevant policies and guidelines to be enacted during epidemics of highly infectious conditions.

4.2.3.5 Protection of the environment and reduction of carbon emissions

- Eye health facilities shall be climate and environment-friendly to reduce the impact of eye health services on climate and the environment; and
- Emerging eye health technologies and initiatives that reduce hospital waste shall be introduced from time to time.

4.2.3.6 Policy targets for infrastructure, equipment, supplies and technologies

- All county hospitals have designated space for an eye unit/department;
- The National Referral Hospital all Regional Hospitals and all County Hospitals have an eye department with a theatre;
- At any one time, 80% of eye care equipment at county, Regional and National Referral Hospital level is functional; and
- Eighty per cent of eye care consumables recommended by the WHO PECL are listed in the essential list of the Central Medical Store (CMS).

4.2.4. Eye health information and research for evidenced based eye health services

Outcome: Eye Health Management Information Systems, research for evidence-based planning, resource mobilisation and advocacy for improved quality and efficiency of eye health services strengthened.

Rationale: Eye Health is recognised as a critical contributor to the attainment of several SDGs, therefore its outcome/impact indicator, namely cataract surgery, has been included among the SDG 3 indicators. Despite the importance of eye health to the pro-poor agenda, only a few indicators are collected and eye health information does not translate to decision-making and action. Data collection and utilisation are critical for informing service delivery and advocacy. The policy proposes strengthening data collection, instituting data utilisation and the inclusion of eye health indicators in the national health priority list of indicators.

Objective: To strengthen Management Information Systems and promote research for evidence-based planning, resource mobilisation and advocacy for improved quality and efficiency of eye health services.

4.2.4.1 National level

Eye health shall be integrated into the various platforms of the Health Information system.

In particular eye health will be integrated into the following health management information systems:

- The integrated Financial Management Information System;
- The Human Resource Information System;
- The Physical Assets and Management Information system; and
- The Health Information System, including the Community Based Information System (CBIS).

Approved national eye health indicators that reflect global developments and national needs shall be reviewed at the end of every cycle of the National Eye Health Strategic Plan.

The National Eye Health Program shall establish an eye health program management information system to track project and program activities.

The National Eye Health Program shall submit annual reports on eye health to the National Eye Health Coordinating Committee, MOH Senior Management Team and Top Management of MOH.

The HMIS eye care data and the information from the eye health program management information system shall be submitted/entered into the WHO Africa repository.

4.2.4.2 National and county hospitals

The head of the eye department/unit together with the officer in charge of the health information platform shall ensure quality eye health data is entered in the system.

4.2.4.3 Research

- Research projects may be initiated at any level of health care and related programs. Coordination of research projects shall be at the National Eye Health Program Office;
- All research proposals shall be approved by the National ethical and research committee or relevant institutions;
- The National Eye Health program shall develop an eye health research agenda that prioritises the needs of the country. External and internal researchers, including students, shall be guided by the research agenda so that findings contribute to the goal of this policy and to the National development priorities; and
- All research reports shall be stored, shared and disseminated to all stakeholders using contextually relevant formats.

4.2.4.4 Advocacy

All research and information generated from the health information platform shall be used to develop advocacy papers for the implementation of this policy, influencing the policy of related programs and mobilisation of resources.

4.2.4.5 Policy targets

- Eye health indicators in the Health Information System platform increased from 6 to 30. They shall include but not be limited to:
 - **Cases:** New cases and revisits, sex, greater than 5 years, less than 5 years;
- **For the following conditions:** refractive errors, low vision, blind in one eye, blind in both eyes, cataract, congenital abnormalities, glaucoma, diabetic retinopathy, eye injuries (all kinds), macular degeneration, uveitis (all kinds), eye cancers, strabismus, conjunctivitis (viral, bacterial, fungal, allergic), corneal ulcers, and keratoconus;
 - **Interventions:** Cataract operations (L eye, R eye), refraction and eyeglasses dispensed, low vision aid prescribed and dispensed, orientation and mobility training, white cane prescribed and dispensed, Anti-VEGF injections, laser, photocoagulation and similar procedures.
- Program management information system established at MOH Eye Health Coordinating office for tracking project and program activities.
- Prevalence data from surveys such as RAABs is available to monitor national trends and the magnitude of blindness and visual impairment.
- Four RAABs conducted during the policy cycle.

4.2.5 Increased eye health financing

Outcome: Eye health financing transformed by integrating eye health in all Ministry of Health funding frameworks and identifying other eye health financing mechanisms.

Rationale: The eye health service is largely dependent on donors for service delivery. As a result, the service is fragmented and reflects the mandates of partners, rather than that of the Government. The MOH is proposing several innovations for mobilising funding for health care. Bong County is one of the counties that have conducted trials of 'community pooling of funds' and 'revolving drug fund.' It is hoped that the experience will result in improved strategies that will be applied nationwide. The MOH has proposed a Health Equity Fund which will protect the poor from the effects of treatment costs. In the short term, the Revolving Drug Fund (RDF), managed by

the hospital and Performance Based Financing (PBF) at the primary care level are the strategies for quality, equitable and affordable health services. PBF is a financing mechanism that gives healthcare providers (facilities or health workers) financial payments based on the achievement of predetermined targets, goals or outputs after being verified for quality.

This policy aims at providing mechanisms that will promote an equitable service which protects the poor from the catastrophic expenditure for eye health by integrating eye health into the health sector's funding strategies.

Objective: To transform eye health financing by integrating eye health in all Ministry of Health funding frameworks and identifying other eye health financing mechanisms.

4.2.5.1 Integration of eye health in MOH funding mechanisms

Eye health funding shall be an integral part of health financing. All innovations, trials, pilots, and national roll-out of funding mechanisms shall include eye health.

The funding mechanisms of MOH shall focus on but not be limited to services listed in the eye health package, especially at the county, district and community levels. This will ensure access to the most basic eye health services for the poor and marginalised communities of the country.

To ensure increased allocation and participation in various funding mechanisms by the eye health program, eye health shall be listed in the Essential Package of Health Services at each of the levels that the package will address.

The basic package of health services covered by any emerging national health insurance scheme shall include priority and common causes of blindness and visual impairment including cataract, glaucoma, uncorrected refractive errors and child eye care.

4.2.5.2 National eye health fund for bulk purchase of eye health supplies and services

The Eye Health program may arrange mechanisms for bulk purchasing of consumables and assistive devices using pooled funds from donors.

This fund shall be counter-funded and managed by the Ministry of Health, supervised by the National Eye Committee and audited by the Auditor General's office.

4.2.5.3 Direct application of funds to programs in the national eye health strategy

Apart from pooled funds; development partners may apply for their funding directly to eye health services in accordance with their individual mandates. This direct utilisation of funds by development partners shall be coordinated by the National Eye Health Program to avoid duplication and to ensure the most marginalised parts of the country receive quality eye health services.

4.2.5.4 Targets for financing

- Eye health is listed among the common conditions to benefit from various funding mechanism;
- Eye Health is included in the Essential Package of Health Services comprehensively; and
- Funding for eye health by the GoL increased by 20% from the 2023 baseline.

4.2.6 Leadership, coordination and partnerships for effective service delivery

Outcome: Leadership, governance, coordination, and effective partnerships for a cohesive, integrated eye health service at community, district, county and national levels strengthened.

Rationale: The eye health sub-sector has many players, implementing partners and beneficiaries. Eye health cuts across health, education, social development, industry, transport and finance sectors. Within the health sector, eye health interlinks with NCD and NTD programs, maternal, newborn and child health services and community health programs. Coordinating preventive, promotive, curative, and rehabilitative eye health services across many programs requires effective coordination at different levels of care.

The following policy statements shall ensure governance and coordination mechanisms are in place for effective program implementation.

Objective: To strengthen leadership, governance, coordination and effective partnerships for a cohesive, and integrated eye health services at community, district, county and national levels.

4.2.6.1 Coordinating office

There shall be an established office at the MOH to coordinate eye health services, develop policies, guidelines and strategic plans and ensure the program is monitored and evaluated; and

The office shall be headed by a senior medical officer; preferably an ophthalmologist or a senior eye health staff designated National Eye Health Program Manager.

4.2.6.2 National Eye Health Committee

Establishment and appointment: A National Eye Health Committee shall be established by the Minister of Health and members appointed by the Chief Medical Officer.

Roles and responsibilities: Roles and responsibilities shall be determined by the Minister as recommended by the national eye health program. These shall be outlined in the terms of reference of the committee.

Membership: Membership of the committee shall include, but is not limited to, the following:

- The Assistant Minister of the Division of Preventive Services;
- One Ophthalmologist from the National Referral Hospital;
- Ophthalmologists representing each Regional Hospital;
- Representatives each from MOE Special Needs program and school health program;
- Representative from the Ministry of Gender, Children and Social Protection, Disability Program;
- Representatives from the eye health donors/development partners;
- Representative from visually impaired Organisation;
- Representative from the eye health private sector;
- Representative from the office of the chief Nursing and Midwifery

- Representative from the Professional body of Eye Health and
- Program managers from HRH, NCD, NTD, Community Health Services and Communicable Disease.

Membership shall be by the office and not on an individual basis.

The committee shall not exceed 21 people.

The eye health program manager shall be the secretary and shall have no voting rights.

The Assistant Minister of the Division of Preventive Services shall chair the committee.

Committee cycle: The committee members shall serve a term of five years, aligned to the eye health strategic plan. New members shall be appointed during the development of the eye health plan to enable them to participate in its development for greater ownership.

Committee facilitation: The committee shall operate under the general terms that govern intersectoral and inter-health program committees. Finer details that differ from other committees shall be introduced as and when appropriate by the CMO.

4.2.6.3 Leadership and coordination at national and regional referral and county level

The National Program coordination has been stated above.

The National Program shall establish regional and county eye health teams;

Regional and county Eye Health Coordinators shall be appointed based on competency and ophthalmic training to lead the eye care teams and coordinate eye health activities at regional and county levels; she/he shall be a member of the County Health Team.

There shall be county eye health committees with clear roles and responsibilities that will report to the National Eye Health Committee.

The County eye health coordinators shall be members of the County Health Team.

4.2.6.4 Targets

- Functional Inter-ministerial National Eye Health Coordinating Committee;
- 15 Functional County Eye Health Coordinating Committees; and
- County Eye Health Worker is on the County Health Team.

5.0 Implementation arrangement

5.1 Implementation framework

5.1.1 Delivering a unified eye health strategic plan within the national health plan

The policy environment within which this policy will be implemented is dynamic and influenced by global politics, policies, the national agenda, and socioeconomic growth. The Liberian health service is in transition from donor dependency to sustainable alternative sources of funding. While global and local health emergencies disrupt the implementation of policies and plans, they provide the impetus for improved health delivery systems. This policy, therefore, is elastic and applicable to emerging changes because its key thrust is inclusion and pro-poor eye care. The implementation framework, therefore, should be applied flexibly, innovating and changing as the health situation evolves.

The National Eye Health Policy shall be implemented through two five-year strategic eye health plans and annual operational plans. The annual plans shall be developed through bottom-up approaches, integrated into the County health operational plans guided by the National eye health program. The eye health strategies shall respond to the National Health Plans and contribute to the national health goals.

As the Ministry of Health increasingly adopts a strategy of performance-based financing, eye health will progressively benefit from this and other approaches from the mainstream resource envelope of the health sector in addition to the circle of donors whose mandate is only eye health. This two-pronged approach will not only raise the profile of eye health but also ensure the provision of care at all levels of health delivery.

The ethos of a ‘one health service’, which the National Health Policy promotes, shall be adopted by:

- Transforming eye care from an almost vertical program to a fully integrated program that is planned, budgeted and provided for at community, district, county and national levels;
- Implementing a unified strategy that recognises and utilises the public, faith-based and private for-profit facilities to ensure universal access to eye care;
- Coordinating the eye health donors and development partners to subscribe to the National Eye Health agenda within the MOH Support Partners Coordination Unit;
- Collaborating with linked service delivery programs such as NCD, NTD, MCH, health promotion, and Communicable Disease and Community Health; and
- Liaising with support programs including financing, HRH, infrastructure, health information systems, partner coordination, supply chain, policy planning, and resource mobilisation.
- Partnerships with other sectors such as education and social services to promote inclusive eye health.
- The national eye health indicators will be used to monitor the implementation of the eye health policy. The indicators will be incorporated as part of the national health management information system and the existing national data collection system will be used to collect eye health data.

5.1.2 Institutional framework for implementing the national eye health policy

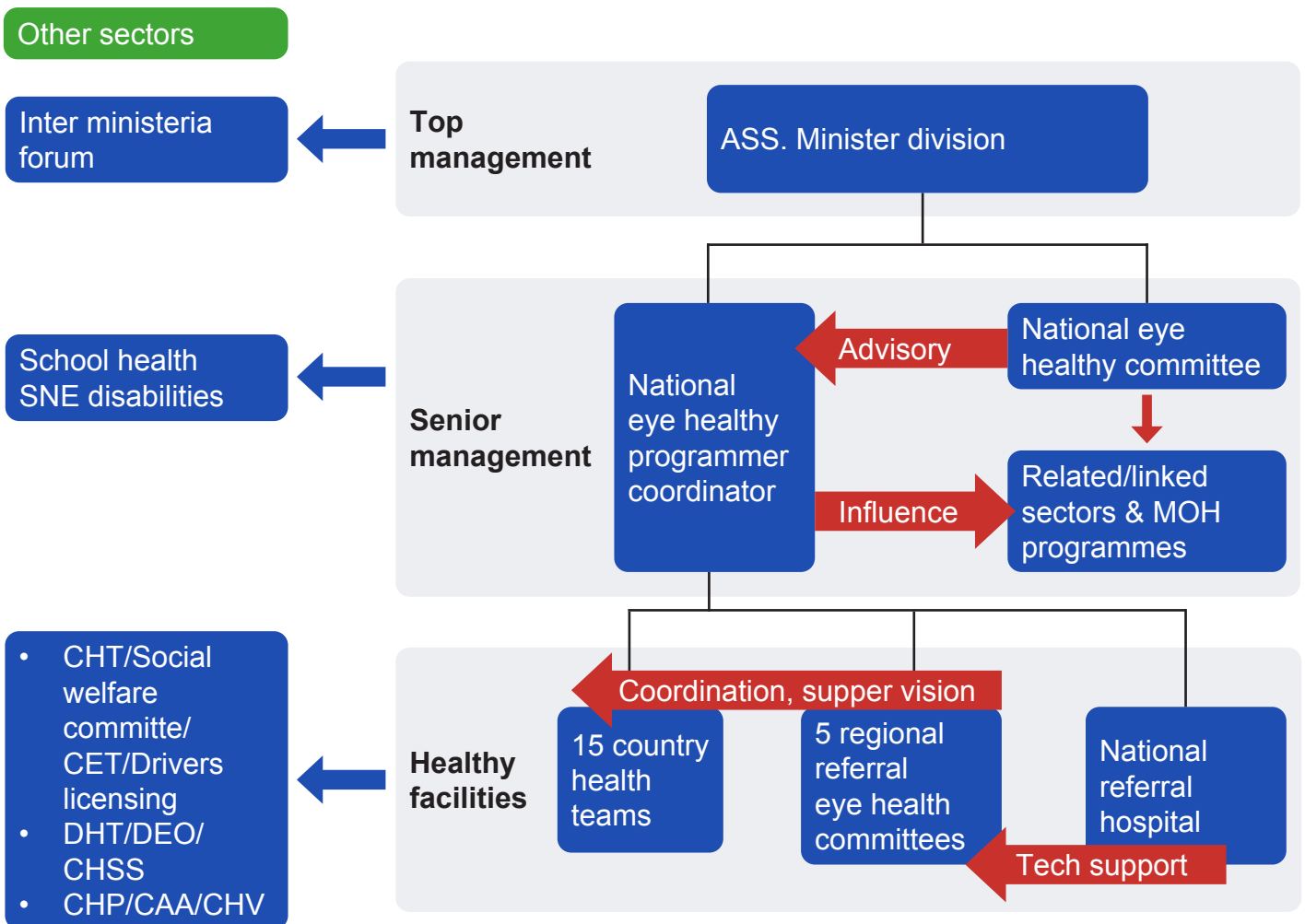
The institutional framework is based on the MOH Organogram for national and county levels (Version 3, 2022) and the Decentralization Governance and Management Operational Guidelines, 2020^{xiii}. For secondary and tertiary eye care, the policy will be implemented through public, private and NGO facilities especially the facilities designated for these services by the MOH. The detailed institutional framework is in Appendix III.

5.2 Governance, coordination and partnerships

Delivering eye health through the implementation framework described above calls for visionary leadership that is able to coordinate services at the community, county and national levels. This policy provides for a Governance structure (section 4.2.6) that is integrated into the decentralised governance of health services.

The coordination is demonstrated in the diagram is presented below:

Figure 4: Organizational chart for coordination of implementation of the policy



The National Health Policy provides for further decentralisation of the health sector by strengthening the management, responsiveness, transparency and accountability within the County, including greater involvement of the community in the governance of health services and health facilities. The eye health program shall be integrated into the decentralised management of health care, thus benefiting from all the provisions at County level. The program shall also establish, within the decentralised setting, a technical coordination mechanism to ensure equitable and quality service delivery.

The policy provides an effective mechanism for various partners including development partners, donors, the private sector and consumers of eye care services. The partnership mechanism operates through the National and County Eye Health Committees. Through this partnership, Liberia will benefit from economy of scale through bulk purchasing of eye health consumables and spectacles.

5.3 WHO primary eye care interventions

WHO has developed the Primary Eye Care Interventions (PECI) which provide the most cost-effective interventions for eye care at primary, secondary and tertiary levels. This document will inform the inclusion of eye care in the Essential Health Services Package and the delivery of eye care in Liberia. The package is a tool that will drive delivery of the goal and objectives of this policy.

5.4 Advocacy

Implementation of the National Eye Health Policy requires concerted, focused advocacy that is results-oriented. Great change is required for eye health to be lifted from an insignificant service to the high profile that is required for it to attract attention and resources. This steep transition requires evidence-based advocacy strategies that have short-spans and are focused on issues of great leverage. Three 3-year advocacy strategies shall be developed under the auspices of the Assistant Minister for Preventive Health Services. Eye health champions will be identified and skilled to advocate. Evidence from research, DHIS2 and county reports shall be used to develop policy briefs that the program manager will present at various forums. Ophthalmologists and County eye health coordinators shall be trained in advocacy. Concerted, focused advocacy is among the most critical enablers of the policy and will be prioritised at implementation.

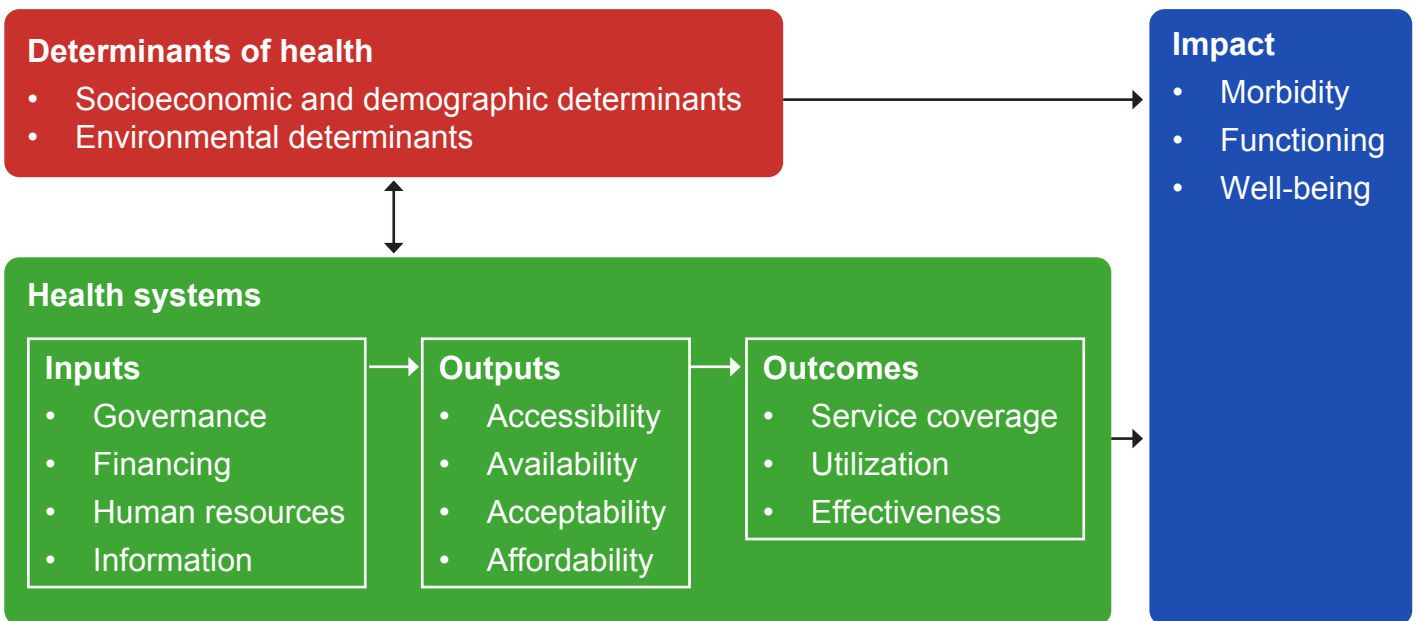
5.5 Continuing capacity building at all levels

All the items listed in this chapter 'Implementation Approach' require ophthalmologists and ophthalmic personnel with excellent eye care skills. In addition, they MUST have soft skills in communication, advocacy, administration, planning, data analysis and managing funds. Continuous training in these added skills is imperative for the realisation of the objectives and goals of the policy.

6.0 Monitoring and evaluation

The dynamic environment within which this policy will be implemented requires eye health activities to be constantly monitored and regularly evaluated for relevance, effectiveness and impact. This requires a rigorous information management system as provided for in section 4.2.4. County, Regional Referral Hospitals and the National Hospital require proper documentation of activities of service delivery, training, supervision and engagement with partners and administrators. The need for evidence on a continuous basis, evidence which may not be collected by the DHIS2, further proves the need for administrative support to the eye health units to collect data. The monitoring, evaluation and learning framework in Figure 5 below can be used at different levels to monitor policy interventions.

Figure 5: Evaluation frame work for health services



The indicators listed in the monitoring and evaluation framework (Appendix IV) were selected based on:

- WHO PEIC;
- The capacity for the MOH to collect, analyse and utilise the indicators;
- The likelihood of their acceptability on the DHIS2 and other MOH data collection platforms; and
- The weight of the indicator in providing information on coverage, quality and integration.

The essential purpose of these indicators and related targets is to drive eye health coverage of quality care.

7.0 Policy enabling environment

7.1 Legal and policy framework

7.1.1 National legal and policy supporting documents

The Prop-Poor Agenda for Prosperity and Development (PAPD), 2018-2023^{xiv}. It aims at strengthening the capacity of people to thrive, unifying Liberians at home and abroad under one development process, addressing the basic needs for secure income, improving access to quality services and promoting inclusive environment growth. The thrust of the PAPD includes a shift from a sectoral to an integrated multi-sectoral approach: monitoring and evaluation based on geographic development regions defined by poverty indicators.

National commission on disabilities. Liberia ratified the United Nations Convention on the Rights of People with Disabilities (UNCRPD) in 2012. In response the Government formed a national commission on disability to address the rights of people with disabilities and ensure their inclusion in all development processes. The role of the commission is to raise awareness, advocate and participate in formulation of laws that include disability. The commission monitors Government programs to ensure that the provisions of the UNCRPD are upheld.

National Action Plan for the inclusion of persons with disabilities in Liberia

A National Action Plan for the Inclusion of Persons with Disabilities in Liberia (2018-2022)^{xv}, was developed in response to the Agenda for Transformation principle of embracing the Human Rights Model of Disability and development. The plan's strategic performance indicators for health are: Ensure priority access to health care; Right to informed consent for health care and procedures, including the right to refuse treatment and Legislation prohibiting discrimination against persons with disabilities by providers of health and life insurance.

The Essential Package of Health Services^{xvi}

The Essential Package of Health Services for Secondary & Tertiary Care of the District, County & National Health Systems is a the tool that delivers the health policy. Its purpose was to: expand the standardized primary package of health services; provide equitable access to essential health center and hospital services; strengthen the service delivery network; and provide the basis for operational plan development.

National Community Health Services Policy 2021-2030^{xvii}

The policy aims at addressing gaps in access and utilization of health services and maintaining sustainable, cost-effective, and resilient health systems across the country at community level. In particular, the policy shall expand and deepen the service delivery package by the community health workforce to address gaps in community engagement, surveillance, Reproductive, Maternal, Newborn, Child and Adolescents Health, NTDs, Communicable diseases and NCDs including eye and mental health. The policy defines community health governance structures of community health committee and Health Facility Development Committee and of cadres including Community Health Services Supervisors, community health assistants, trained traditional midwives and introduces a new cadre, the community health promoter.

The National Health Policy and Plan 2022-2032^{xviii}

The New National Health Policy 2022-2032 seeks to 'Improve the health and wellbeing of all in Liberia' through five inter-related objectives: Strengthen Governance and Leadership, ensure health coverage is universal and that health security is guaranteed, Improved access to quality health services, ensure the availability and retention of a highly skilled and well-motivated workforce, achieve a sustainable, integrated community health program.

National Health Financing Strategy 2021-2026^{xix}

The aim of the National Health Financing Strategy is to transform the health system to become effective, efficient, and equitable, and to attain Universal Health Coverage, enabling access to quality care without suffering financial hardship by: Increasing resource mobilisation, implementing of the Revolving Drug Fund (RDF), Revenue Generation for the Liberia Health Equity Fund, Establishing a Health Sector Pool Fund, implementing Performance-Based Financing.

Public Health Law of Liberia^{xx}

This wide-ranging act provides for regulation of health practice, health personnel, role of district and country administration, health care in emergency situations and management and disposal of medicines. Recent updates have addressed emerging issues such as HIV and AIDS, Ebola and the Covid 19 pandemic.

7.1.2 International resolutions and commitments

Sustainable development goals: Goal 3 calls for member states to 'Ensure healthy lives and promote well-being for all at all ages^{xxi}. Target 3.8 on Universal Health Coverage^{xxii} is the rallying call underpinning all health guidelines, policies and programs.

Quality of care^{xxiii} is the World Health Assembly resolution on evidence-based professional knowledge that is critical for achieving Universal Health Coverage. Quality care should be effective, safe and people-centered, providing care that responds to individual preferences, needs and values.

Integrated people-centered care^{xxiv} is an approach that puts people and communities at the center of the health system, and surrounds them with responsive services that are coordinated both within and beyond the health sector. It is a tool to achieve UHC and an approach to health system strengthening.

Resolution on global eye care targets. At the 74th Assembly^{xxv} a resolution was adopted for global eye care targets for 2030.

1. The recommended feasible global target for effective coverage of refractive error is: a 40 percentage point increase in effective coverage of refractive error by 2030:
 - Countries with a baseline effective coverage rate of 60% or higher should strive for universal coverage.
 - Countries should aim to achieve an equal increase in effective coverage of near and distance refractive error in all relevant population subgroups, independent of baseline estimates.
2. The recommended feasible global target for effective cataract surgical coverage is: a 30 percentage point increase in effective coverage of cataract surgery by 2030:
 - Countries with a baseline effective coverage rate of 70% or higher should strive for universal coverage.
 - Countries should aim to achieve an equal increase in effective coverage of cataract surgery in all relevant.

WHO Primary eye care interventions (PECI)^{xxvi} provides cost effective interventions for achieving Universal eye Health Coverage integrated within the health system. The package of interventions is the main tool for delivery of this policy.

8.0 Risks and assumptions

8.1 Risks and their mitigation

The health sector is oriented towards curative care yet this policy aims at ensuring provision of promotive, preventive, treatment and rehabilitative eye care. This risk is amplified by eye health leadership at national and regional levels composed of ophthalmologists, optometrists and physician cataract surgeons whose primary calling is treatment. Periodic policy implementation reviews will ensure the policy is adhered to.

Life cycle risk. Most of the population at risk of eye conditions is not earning and is among the poorest and voiceless section of society. These include the elderly who are not earning but have high risk of cataract, blinding trichiasis, presbyopia, age-related macular degeneration and diabetic retinopathy. Children are vulnerable because they are at the disease stage for early prevention of blindness through screening and definitive interventions and yet are dependent on adults for access to care. The policy provides for screening of school-going children by teachers and screening adults by community health personnel. This policy provision will markedly increase access to eye health by these vulnerable groups.

Despite the Program approach, most capital and service delivery resources are controlled by agenda and mandates of International NGOs which could make harmonization and alignment difficult to attain. Both the main health policy and the eye health policy emphasize leadership of Government. Donor –coordination mechanisms have been provided for in the policy and the GoL is keen to ensure maximizing of meager resources through Government led coordination.

8.2 Assumptions

This policy is subject to the following assumptions:

That the MOH will fully implement its new policy especially on health financing because this policy is heavily dependent on national eye health program funding by Government.

That the MOH will expand its service to include improved quality of life instead of focusing on stemming mortality only.

Appendices

Appendix I Table 4: Distribution of ophthalmologists and ophthalmic personnel and outcome (represented by new URE in the DHIS2)

County	NRH/ RH	Ophthalmologist	CS	Optometrists	Ophthalmic Nurse	Optometry technicians	Vision technicians	Opticians	New URE 2021
(*Monrovia)	NRH JFKMC	4	1 LEC, 1 NGO	2 private	3 LEC 1 Private		5JFK	1JFK	See Montserrado
Gbarpolu									0
Grand Cape Mount									17
*Maryland	RH JJ		1		1	1			26
River Gee	Dossen Govt Hospital				1				14
Grand Kru			1			1	1		213
*Bong	RH Phoebe Hospital	1	1		3		2		200
Lofa					2				1
*Nimba	RH J.W. Harley Hospital		1 GoL, 1 private		4	1	1		1,291
*Grand Bassa	RH Liberia Government Hospital					1			0
River Cess									0
*Montserrado	RH Redemption Hospital	1 GoL, 2 NGO, 1 private	3 NGO		2 GoL, 7 NGO, 1 private	4 private 1 NGO		1NGO, 3 private	1,466
Margibi				1 private	1				13
Bomi							1 NGO		0
Sinoe	F.J. Grant Hospital				1				57
Grand Gedeh	Martha Tubman Hospital		1		1				250
Total		9	11	3	28	10	9	5	3,548

Key: Colour strips represent counties served by a RH

*: The county that hosts the RH.

RH: Regional Hospital

URE: Uncorrected Refractive Error

CS: Cataract Surgeon

NRH: National Referral Hospital JF Kennedy

Appendix II Table 5: Internationally recommended eye health workers per population and policy targets

Cadre	Key competencies	Targets	Number available 2022 in the public sphere	Ratio 2022	Gap as of 2022	Required in 2026	Required in 2032
Population	-	-	-	4,650,676		5,053,812	6,000,000
Ophthalmologist	Leadership, surgery	1:250,000	9	1:500,000	9	20	24
Optometrists	Correction of refractive error.	1:250,000	0	-	19	20	24
CS	Diagnoses, treatment, basic refraction, ward care.	-	10	1:450,000	36	50	60
Ophthalmic nurse		1:100,000	26	1:150,000	20	50	60
Optometry 6 technician/ VT 9		1:100,000	6+9=15	1:300,000	31	50	60
Primary Health Care workers	Basic treatment & referral.	1:10,000	-	-	460	500	600
CHA/CHV trained in eye health	Eye health pro-motion, basic screening, dispensing reading spectacles, & referral.	1:200	-	-	23,000	25,000	30,000

Appendix III Institutional Framework for Implementing the National Eye Health Policy

The institutional framework is based on the MOH Organogram for the national and county levels (Version 3, 2022).

Table 6: Institutional Framework for Implementing the National Eye Health Policy

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
National level		
Office of the Assistant Minister of Health for Preventive Services	<ol style="list-style-type: none"> 1. Chair the National Eye Health Coordinating Committee. 2. Advocate for eye health at MOH top management, at intersectoral meetings of ministers, with Parliament, with donors. 	<ol style="list-style-type: none"> 1. Chairs a minimum of 2 meetings of the committee annually. 2. Profile of eye health raised within other ministers, Parliament and donors. 3. Increased flow of funds to eye health and formalised linkages with relevant sectors and donor-supported programs.
Office of the Eye Health Program	<ol style="list-style-type: none"> 1. Guide implementation of strategic plans and operational eye health plans. 2. Coordinate partners and related programs. 3. Liaise with linked sectors to include eye health. 4. Integrate of eye health in other service delivery programs. 5. Ensure eye health is provided for in health support programs. 6. Advocate and report on eye health using analysed data and information from implementation reports. 7. Secretary of the National Eye Health Committee. 8. Support regional and county level eye health committees. 9. Support county eye health teams deliver eye health according to policies and plans. 	<ol style="list-style-type: none"> 1. Strategic plan outputs and outcomes achieved. 2. Eye health partners' support is mapped and coordinated. 3. Guidelines and reports of linked sectors: Education, Social welfare and Transport include eye health. 4. Eye health is mentioned in program policies, guidelines and reports for MCH, NTD, NCD, community health, health promotion, WASH, and communicable disease. 5. Eye health is provided for according to eye health policy in HRH, Health Information Systems, health financing, partner coordination, infrastructure, and medical supplies. 6. Advocacy papers discussed and action agreed to at national and county levels.

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
	<p>10. Ensure the dissemination of the National Eye Health Policy.</p>	<p>Periodic reports presented to Top and senior management of MOH; and to NEHC Committee.</p> <p>7. Functional National Eye Health Committee.</p> <p>8. Functional regional referral level eye health coordinating committees. Receive reports from regional referral level eye health coordinating committees.</p> <p>9. County Health Team membership in each county includes a representative of the county eye team. County Health Team meeting agendas, plans, budgets and reports include eye health activities.</p> <p>10. County Inspectors, County Health officers, County Eye Health Coordinator, County Hospital Director are able to articulate.</p>
<p>National Eye Health Committee</p>	<p>1. Provide technical oversight of coordination and implementation of eye health strategic plans.</p> <p>2. Ensure eye plans respond to Eye Health Policy and other national provisions.</p> <p>3. Advocate for resources for delivery of eye health programs ensuring preventive, promotive, treatment and rehabilitative services are funded rationally.</p> <p>4. Coordinate input from other sectors on eye health service delivery.</p>	<p>1. Eye health plans achieve policy targets and strategic outcomes.</p> <p>2. Eye health plans at national and county level are derived from the Eye Health Policy.</p> <p>3. Eye health resources are available and rationally allocated in preventive, promotive, treatment and rehabilitative eye health care.</p> <p>4. Eye health services delivered seamlessly across the sectors of health, education, social welfare and transport.</p>

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
National Referral Hospital (JFK LEC)	<ol style="list-style-type: none"> 1. Provide tertiary eye care including sub-specialised services. 2. Train medical, nursing and other clinical undergraduates in eye health. 3. Train ophthalmologists 4. Lead eye health research agenda. 5. Provide technical support in the delivery of eye health agenda. 6. Participate in development of training curricula, manuals on eye health. 7. Present periodic reports to the NEHC Committee. 8. Participate and advocate for resources from management teams of JFKMC and donors. 	<ol style="list-style-type: none"> 1. Efficient, good quality tertiary eye care and sub-specialised eye care in accordance to international professional guidelines. 2. All clinical undergraduates rotate through the JFK LEC in accordance to their curriculum. 3. Ophthalmologists and other eye health workers are trained. 4. Eye health agenda developed, technical research proposals are reviewed and eye health research conducted. 5. Quality effective tertiary eye care is provided. 6. Training curricula and manuals on eye health include content from JFK LEC. 7. Periodic reports submitted to the NEHC committee. 8. Increased resource flow to Eye Center from JFKMC budget and from donors.
Ministry of Education	<ol style="list-style-type: none"> 1. Ensure screening of school children for eye conditions and vision is instituted. 2. In collaboration with MOH, build capacity for school screening and referral. 3. In collaboration with MOH, make appropriate provision for rehabilitation of students with disabilities, including assistive devices for those with low vision; and orientation and mobility for the blind. 4. MOE has appropriate representation on the NEHC committee. 	<ol style="list-style-type: none"> 1. School screening tools, guidelines, indicators and reports on eye health in schools are available at schools, district and county education offices and national program offices. 2. Every primary and secondary school has at least two teachers who can screen at any one time. 3. Low vision and Blind students are appropriately referred to ophthalmic personnel, have the required assistive technology and or orientation and mobility training; and are learning. 4. NEHC committee has appropriate representation(s) from MOE for school screening and for Special Needs Education (SNE).

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
Ministry of Gender and Social Welfare	<ol style="list-style-type: none"> 1. Develop and distribute guidelines and supervision for county welfare committees and county social workers. Include identification, referral to county hospitals and resettlement in school/ community for persons with low vision and the Blind. 2. Support collaboration with civil society organisations (CSOs) and women groups in delivery of targeted eye health activities. 3. Ministry of Gender and Social Welfare is effectively represented on the NEHC committee. 	<ol style="list-style-type: none"> 1. County guidelines and supervision reports from Ministry of Gender and Social Welfare at county level include identification, referral to county hospitals and resettlement in school/community for persons with low vision and the Blind. 2. NEHC committee has effective representation from Ministry of Gender and Social Welfare. 3. Ministry of Gender and Social Welfare reports on achieved assignments to the NEHC.
Ministry of Transport	<ol style="list-style-type: none"> 1. Driver licensing/ driving permit renewal guidelines/law include vision examination by ophthalmic personnel at county level who issues a certificate of their findings. 	<ol style="list-style-type: none"> 1. Presence and implementation of guidelines/laws on vision examination by ophthalmic personnel at county level who issues a certificate of their findings before issuance of a driving permit.
Regional level		
County Regional Referral Hospital	<ol style="list-style-type: none"> 1. Deliver good quality and accessible tertiary and secondary eye care services. 2. Provide orientation and mobility training for Blind babies, children and adults. 3. Institute a regional eye health coordinating (REHC) committee with representation of one eye health worker from each catchment county. 4. The mandate of the regional committee shall include but not be limited coordination of eye health within the region, plan, supervise and monitor service delivery, organise professional development for eye care workers. 	<ol style="list-style-type: none"> 1. Efficient, good quality and accessible tertiary and secondary eye care services provided; these include patient education and annual screening of all patients with diabetes, screening premature babies for ROP and other Neonatal eye screening 2. Orientation and mobility training for Blind babies, children and adults is available at all County Regional Referral Hospitals. 3. REHC committee with representation of at least an eye health worker from each catchment county. 4. REHC delivers on its listed mandate.

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
	<ol style="list-style-type: none"> 5. Plan, deliver and report on regional outreach surgical services. 6. The regional eye health coordinator shall ensure eye health is among the funded activities of the regional referral hospital plan. 7. The eye health regional coordinator shall coordinate development partners' contribution within the region. 8. The eye health regional coordinator shall represent the region on the NEHC Committee where they shall present the regional report. 	<ol style="list-style-type: none"> 5. Outreach surgical services planned, delivered and reports submitted to hospital director, donors and county health teams where outreach was held. 6. The regional referral hospital purchases at least half of the medicines and sundries required for eye surgery. The regional referral hospital funds at least one outreach a year. 7. Efficient utilisation of resources from development partners including technical assistance. 8. Five and any additional regional coordinators attend the NEHC committee meetings at least twice a year and present their respective regional reports.
County level		
	<ol style="list-style-type: none"> 1. Deliver good quality and accessible primary, secondary eye care services, including the provision of good quality cataract surgeries, refraction and dispensing of appropriate glasses. 2. The County Health Team shall include ophthalmologist or ophthalmic personnel or representative. 3. The ophthalmologist or ophthalmic personnel shall ensure elements of the eye health strategic plan and county eye health activity plans are discussed, implemented, supervised and included in County Health Team's reports. 	<ol style="list-style-type: none"> 1. Efficient, good quality and accessible tertiary and secondary eye care services provided which include patient education and annual screening of all patients with diabetes, screening premature babies for ROP and other Neonatal eye screening, screening babies attending immunisation clinics, cataract surgeries, refraction and dispensing of appropriate spectacles. 2. At least half of County Health Team meetings are attended by ophthalmologist or ophthalmic personnel. 3. County Health Team minutes, reports, plans and budgets include eye health.

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
	4. The ophthalmologist or ophthalmic personnel in the County hospital shall examine and issue certificates for driver licensing.	4. Ophthalmologist or ophthalmic personnel issue corrupt free vision certificate for driver licensing.
District level		
	<ol style="list-style-type: none"> 1. The ophthalmologist or ophthalmic personnel on the County Health Team shall ensure each district in the county has a PECW on the District Health Team. 2. The County Health Team shall ensure each district hospital and health centers II have at least one trained PECW. 3. The ophthalmologist or ophthalmic personnel on the County Health Team shall coordinate with the County Education Team and District teams to ensure school eye screening of students happens annually in each school. 4. The ophthalmologist or ophthalmic personnel shall coordinate, provide resource persons and train PECW in the District. 5. The District Health Team shall ensure eye screening and appropriate referral of students in its catchment schools. 6. The District Health Team shall ensure eye health is included in integrated community outreach services. 7. The District Health Team shall ensure CHA and CHV conduct eye screening, distribute ready readers and refer to the HC II, district hospital or county hospital. 	<ol style="list-style-type: none"> 1. Every District Health Team has a PECW on its membership. 2. Every district hospital and HC II has at least one trained PECW. 3. School eye screening of primary and secondary school students is conducted annually in 80% of the schools. 4. Every district hospital and HC II has at least a PECW at any one time. 5. Eye screening and referral is coordinated by District Health Team. 6. Integrated community outreach services includes eye health (screening, public education, identification, referral). 7. Eye screening, distribution of ready readers and referral take place at community level provided by CHA/CHV. 8. Annual school screening exercises, referrals to county hospitals.

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
	9. Schools shall conduct annual screening of students and refer students who fail the test to country eye clinic.	
Activity reporting levels		
Activity reporting: From lower to higher levels	<ol style="list-style-type: none"> 1. Those who fail the screening (either in the community or school screening or health facility-based screening) shall have their information filled in the DHIS2 at their nearest health facility through the PECW in the facility. 2. Reports of school vision screening shall be sent to the District Education Officer who shall submit them to the County Education Officer who shall share them with the County eye Health Coordinator. 3. Reports from community screening and health facility screening reports shall be submitted by the CHSS to the District Health Team, who shall submit the reports to the County Health Team. 4. The County Health Team shall submit school screening, outreach, training and other activity reports twice in a year to the regional eye health coordinator who shall compile an annual report for the NEHC Committee. 	<ol style="list-style-type: none"> 1. Data entered in DHIS II of persons (adults and children) who fail screening tests. 2. School vision screening reports submitted to: County eye health coordinator through The County Education Officer through The District Education Officer. 3. Community and health facility screening reports submitted to the County eye health coordinator through County Health Team through the District Health Team. 4. County Health Team reports submitted to the regional eye health coordinator twice a year Regional eye health coordinator presents regional report bi-annually at the NEHC committee.

Office/Committee	Role on delivering on the Eye Health Policy	Indicator of performance
Feedback from NEHC committee to County	<ol style="list-style-type: none"> 1. Within 2 weeks of a NEHC committee meeting, the minutes shall be sent to the members. 2. Regional eye health coordinators shall extract relevant feedback and send briefs to the Director of the Regional referral hospital, the regional eye coordinating team, the County Health Team and the District Health Team. 3. Briefing is discussed in the next county, district and regional eye health coordinating committee meeting. 	<ol style="list-style-type: none"> 1. NEHC committee minutes sent to members within 2 weeks of meeting. 2. Within two weeks of receiving report regional eye health coordinator submits brief to stakeholders. 3. Within 2 months of a NEHC committee meeting, the issues raised are discussed by various committees for action.

Appendix IV Policy Monitoring and Evaluation Framework

Table 7: Policy Monitoring and Evaluation Framework

Policy impact/outcome	Policy interventions	Target 2026	Target 2032	Indicator of achievement
Impact and outcome				
Service delivery				
Morbidity	Elimination of onchocerciasis.	Sero prevalence of < 0.1% in children ⁶	Sero prevalence of < 0.1% in children.	% of sero prevalence children among children under 15 years with
	Management of common non-blinding conditions.	# treated increased by 2% from 2021 level.	# treated increased by 2% from 2026 level.	% increment of common non-blinding conditions in OPD.
	Management of common blinding & Visual impairing conditions.	eCSC increased 30% in 2026 from the 2023 baseline.	eCSC increased 30% in 2023 from the 2026 baseline.	% increase of eCSC
			eCSC increased by 30% in 2032 from the 2026 baseline.	% increase in eCSC
		eREC increased by 20% in 2026 from the 2022 baseline.	eREC) increased by 40% in 2032 from the 2026 baseline.	% increase in eREC
	PECI	Prevalence of Blindness reduced from the 2023 baseline by 10%	Prevalence of Blindness reduced from the 2026 baseline by 10%	Prevalence of Blindness
		Prevalence of visual impairment from refractive errors reduced by 30% from the 2023 baseline.	Prevalence of visual impairment from refractive errors reduced by 30% from the 2026 baseline.	Prevalence of Visual Impairment

⁶ Using ELISA test for Onchocerca volvulus

Policy impact/ outcome	Policy interventions	Target 2026	Target 2032	Indicator of achievement
Functioning & Wellbeing	Rehabilitation of the Blind and people with low vision.	75% of newly blind children, youth and adults are ADL independent.	100% of newly blind children, youth and adults are ADL independent.	% of blind people since 2023 who are ADL independent (for age).
Input				
Human resource for eye health				
	Competency of Eye Health workers.	30% of district hospital, health center II has nurse/clinician trained in eye health (may be referred to as a PECW).	Every district hospital, health center II has nurse/clinician trained in eye care (may be referred to as a PECW).	% of district hospitals and health center II with a health worker trained in eye care using the WHO PECW manual.
				% of district hospitals and health center II with a health worker able to identify URE and cataract and correctly refer.
	Deployment	All regional referral hospitals have ophthalmic teams.	80% of County hospitals have an ophthalmologist.	% of county hospitals with ophthalmologist(s).
		Ophthalmologists per population 1:400,000.	Ophthalmologists per population 1:250,000.	Ratio of Ophthalmologists per population.
		Ophthalmic Nurses 1:100,000.	Ophthalmic Nurses per population 1:100,000.	Ratio of Ophthalmic Nurses per population.
		Optometry Technicians/VT 1:300,000.	Optometry Technicians/VT per population 1:200,000.	Ratio of Optometry Technicians/VT per population.

Policy impact/outcome	Policy interventions	Target 2026	Target 2032	Indicator of achievement
		At least 1:300-500 population CHP/CHA trained in eye health in 50% of the districts. At least 2 teachers per primary and secondary trained in vision screening in 50% of the districts	At least 1:300-500 population CHP/CHA trained in eye health. At least 2 teachers per primary and secondary trained in vision screening.	Ratio of trained CHP/CHA per population. % schools with 2 teachers trained in screening available at school.
	Distribution	Every county hospital has at least two ophthalmic personnel.	Every county hospital has at least three ophthalmic personnel.	% of country hospitals with at least three ophthalmic personnel.
			Every district hospital, health center II has Nurse/Clinician trained in eye care (may be referred to as a PECW).	% of district hospitals, health center II with Nurse/Clinician trained in eye care.
Infrastructure, equipment and consumables				
Infrastructure	Develop/expand infrastructure.	All regional referral hospitals have an eye department with a theatre.	All county hospitals have an eye department with a theatre.	Number of regional referral hospitals with eye department with theatre Number of country hospitals with eye department.
	Make infrastructure accessible for PwDs and Older persons.	All eye health regional referral infrastructure has physical accessibility.	All eye health county infrastructure has physical accessibility.	Number of eye departments with physically accessible infrastructure.

Policy impact/outcome	Policy interventions	Target 2026	Target 2032	Indicator of achievement
Equipment	Purchase, maintenance and repair.	At any one time 70% of eye care equipment at county, Regional Referral and National Referral Hospital is be functional.	At any one time 80% of eye care equipment at county, Regional Referral and National Referral Hospital is be functional.	% of functional eye equipment.
Consumables	Sustainable supply	Fifty per cent of eye care consumables recommended by the WHO PEGI are listed in the essential list of the National Drug Service.	Eighty per cent of eye care consumables recommended by the WHO PEGI are listed in the essential list of the National Drug Service.	% of eye care consumables recommended by the WHO PEGI that are listed in the essential list of the National Drug Service.
Health Information System				
	Increase number of indicators.	Eye health indicators in the Health Information System platform increased from 6 to 20.	Eye health indicators in the Health Information System platform increased from 20 to 30.	Number of eye health indicators in the Health Information System Platform.
	MIS established in eye health program coordinating office at MOH.	Eye health input and process indicators collected for each outcome.	Eye health input and process indicators collected for each outcome.	Functional MIS No of process indicators collected for each outcome.
	Research	2 RAABs conducted.	2 more RAABs conducted.	Number of prevalence surveys conducted.

Policy impact/outcome	Policy interventions	Target 2026	Target 2032	Indicator of achievement
Increased financing				
	Advocacy	Eye Health is included in the Essential Package of Health Services comprehensively.	Eye Health is included in the Essential Package of Health Services comprehensively.	Qualitative indicator: Eye health comprehensively mentioned in all the building blocks of health systems at primary, secondary and tertiary care in the Essential Package of Health Services.
	Advocacy	Eye health is listed among the common conditions to benefit from various funding mechanisms.	Eye health is listed among the common conditions to benefit from various funding mechanisms.	Number of GoL health funding mechanisms that include eye health.
Leadership, Coordination and Partnerships				
	Advocacy	Functional Inter-ministerial National Eye Health Coordinating Committee.	Functional Inter-ministerial National Eye Health Coordinating Committee.	Quality and frequency of meetings. Number of Ministries represented on the National Eye Health Coordinating Committee.
		15 Functional County Eye Health Coordinating Committees.	15 Functional County Eye Health Coordinating Committees.	Number of functional county eye health committees. Quality of output of county eye health committees.
		County Eye Health Worker is on the County Health Team.	County Eye Health Worker is on the County Health Team.	Number of country health teams with eye health worker on the team.

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