Eye Health System Assessment: Sierra Leone

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Abbreviations and acronyms

BEHL	Baptist Eye Hospital, Lunsar
BPEHS	Basic Package of Essential Health Services
CHC	Community Health Centre
CHO	Community Health Officer
CHP	Community Health Post
CHW	Community Health Worker
CMO	Chief Medical Officer
CPD	Continuing Professional Development
CSO	Civil Society Organisation
CSR	Cataract Surgical Rate
DDMS	Directorate of Drugs and Medical Supplies
DHIS2	District Health Information System
DHMT	District Health Management Team
DMO	District Medical Officer
DPO	Disabled People's Organisation
DPPI	Directorate of Policy, Planning and Information
EHSA	Eye Health System Assessment
EML	Essential Medicines List
FHCI	Free Health Care Initiative
GoSL	Government of Sierra Leone
HRH	Human Resources for Health
KII	Key Informant Interview
LMIS	Logistics Management Information System
MCHP	Maternal and Child Health Post
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NCD	Non-Communicable Disease
NECP	National Eye Care Programme
NEHP	National Eye Health Programme
NGO	Non-Governmental Organisations
NHSSP	National Health Sector Strategic Plan
PEC	Primary Eye Care
PHU	Peripheral Health Unit
RAAB	Rapid Assessment of Avoidable Blindness
SLAB	Sierra Leone Association of the Blind
SLeSHI	Sierra Leone Social Health Insurance
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UMC Kissy	United Methodist Church, Kissy
WACS	West African College of Surgeons
WHO	World Health Organization

Executive summary

This follow-up Eye Health System Assessment (EHSA) provides an in-depth analysis of Sierra Leone's eye health system, using the World Health Organization (WHO) health system building block framework: governance, financing, human resources, service delivery, medical products and technologies, and health information systems. This assessment builds on the 2013 EHSA and included a desk-based review (completed in July 2025) and insights from key informant interviews (KIIs) and focus group discussions conducted across six districts: Bo, Makeni, Moyamba, Pujehun, Tonkolili, and Freetown, and national-level actors within the Ministry of Health (MoH) and partner organisations.

The findings demonstrate notable progress in building a coherent, structured national eye health system, yet persistent gaps remain in institutionalisation, financing, and sustainability. In the past decade, eye health has become integrated within the broader health sector, guided by national policy, institutional coordination, and expanded service coverage. The ongoing placement of the National Eye Health Programme (NEHP) within the Directorate of Primary Health Care, and the adoption of the National Eye Health Policy (2021-2030) and the National Eye Health Strategic Plan (2024-2030), represents a significant milestone in governance and system development. These frameworks prioritise training more eye health workers, integrating eye care into broader health services, and increasing access to quality care.

Despite these achievements, the system remains heavily dependent on partner organisations that continue to support planning, service delivery, training, and supervision. The government of Sierra Leone's (GoSL) financial investment in eye health is minimal, with insufficient funding at the national, district, and local council levels. Facilities rely on cost-recovery mechanisms, which are inadequate to cover operating costs and are further constrained by the large proportion of patients enrolled in the Free Health Care Initiative (FHCI). This renders the system vulnerable to unpredictable donor support and weakens domestic financial stability.

Since 2013, eye health has been provided by a growing cadre of skilled health professionals. The eye health workforce increased from 66 in 2013 to 97 in 2025 (1, 2). However, the number of qualified professionals remains far below the national need, and many units still rely on long-serving volunteers (e.g., registered nurses, community health nurses, and ophthalmologists) who are either retired or not absorbed into the government payroll. This dependence on volunteer labour, alongside limited access to structured training and career development, undermines service quality and staff motivation. However, the NEHP and its partners have supported training initiatives, and a nationally owned and sustained training pipeline is emerging.

In the past decade, eye care services have spread to more parts of the country. Most regional and district hospitals now have eye units and mobile outreach efforts, mainly supported by external partners and donors, that have helped more people in communities access eye check-ups and cataract surgeries. There is a growing number of health facilities providing cataract surgeries in the country, an improvement from seven facilities reported in 2013 assessment. Nonetheless, service provision remains uneven, constrained by limited infrastructure, inconsistent equipment availability, and weak referral and follow-up systems. The ongoing hub-and-spoke model, where regional hospitals serve as referral centres for peripheral facilities, has improved coordination over the years but remains partially institutionalised and highly dependent on donor technical and financial support.

There has been progress in the availability of ophthalmic equipment and medicines, largely due to partner donations. Most eye care facilities have basic diagnostic, medical, and surgical devices and consumables, such as slit lamps and sterilisers; however, shortages of anti-glaucoma medication and spectacles persist. Inadequate equipment maintenance is a major constraint, as few biomedical engineers are trained in ophthalmic device repair, leading to frequent downtime and underutilisation of critical assets. The recent integration of ophthalmic commodities into the national supply chain

through the mSupply system remains incomplete. Consequently, procurement is still largely ad hoc, and partner driven.

The recent integration of eye health data into the District Health Information System (DHIS2) is a significant step towards improving monitoring and accountability. Eye-specific indicators are captured through "*Health Form 13*", an eye care assessment used in all MoH managed health facilities; however, reporting remains inconsistent due to irregular form availability and ineffective feedback. Programme planning and decision-making rarely fully utilise available data, and most analyses are conducted by development partners rather than MoH structures. Strengthening routine data use for local planning and providing consistent feedback are vital for improving governance and accountability.

Across the system, several cross-cutting challenges persist. Coordination between national and district levels remains inconsistent, and decision-making is overly centralised, limiting district ownership. Funding from the central government and the MoH is disjointed, and the absence of predictable domestic funding restricts the implementation of the national strategic plan. Workforce morale suffers from low remuneration and limited career progression, and there are few incentives to retain staff in rural areas. Maintenance systems for medical equipment are underdeveloped, and data systems are not fully institutionalised.

Despite these challenges, Sierra Leone's eye health system has made marked progress since 2013. The system's resilience, shown by its sustained operations during health emergencies such as Ebola and COVID-19, highlights the potential for further consolidation. To sustain these gains, the GoSL must deepen ownership of eye health. This requires increased domestic financing, institutionalised governance, and strengthened human resources. Integrating eye health into the national health insurance scheme (SLeSHI), including it in district budgets, and creating a technical working group to guide the implementation of the strategic plan will enhance policy coherence and accountability. Ongoing partnership with development agencies and organisations remains essential. However, future support should focus more on building national capacity and transferring financial and managerial responsibility to the GoSL.

In summary, Sierra Leone's eye health system has strong foundations in policy, leadership, and service delivery. To maintain this positive trajectory, the next phase of reform should prioritise sustainability, integration, and equity. Transitioning to a domestically financed, government-led system is crucial to making eye care a permanent component of Universal Health Coverage (UHC) in the region.

Key findings

Leadership and Governance

Strengths

- The National Eye Health Policy (2021–2030) and Strategic Plan (2024–2030) provide a unified framework for building capacity, allocating resources, and delivering eye health services.
- Coordination among the MoH, District Health Management Teams (DHMTs), and partner organisations has improved.
- Government increasingly recognises eye health as part of UHC.
- Greater visibility of eye health within national discussions on non-communicable diseases (NCDs) and primary health care.
- Improved partnership and alignment between national and subnational actors have resulted in more effective programming.

Weaknesses

- District-level decision-making and ownership are limited.
- While supervision and performance monitoring mechanisms are in place at the MoH, oversight at the facility and district levels remains limited.
- Strategic planning is inconsistently implemented at the district and facility levels, largely due to inadequate financing and limited accountability structures.
- Due to competing priorities within the Directorate of Primary Health Care, eye health has seen a reduction in policy influence, including resource allocation decisions.

Health Financing

Strengths

- There is sustained external support, particularly from development partners, ensuring ongoing service delivery.
- Government contributions, including staff salaries, infrastructure, and facility maintenance, provide partial stability for the system.
- Cost-recovery mechanisms, which allow hospitals to recuperate some expenses by charging patients directly for certain services, help offset small operational costs.
- Eye care is integrated into the FHCI (which now includes women and children, Ebola survivors, and the elderly), improving financial access for these groups.

Weaknesses

- There is a dedicated budget line for eye health in the national budget, but significant gaps remain in routine financing for eye health services.
- Funding remains inadequate to support effective policy implementation and related monitoring activities.
- The overreliance on external support creates a fragile and unsustainable financing model.
- The cost-recovery system is weak due to high volumes of patients receiving free or subsidised services.
- Limited government advocacy and investment in integrating eye health into the emerging SLeSHI scheme.

Health Workforce

Strengths

- A growing cadre of trained eye health professionals, including ophthalmologists, ophthalmic nurses, and ophthalmic Community Health Officers (CHOs), is emerging.
- Increased number of in-country training opportunities supported by development and regional partner organisations.
- Eye health workers demonstrate a strong motivation and commitment to serving their communities.
- Strong sense of teamwork at the facility level, with effective collaboration between clinical and non-clinical staff, including volunteers (e.g., registered nurses and community health workers (CHWs) who are yet to be absorbed into government payroll).

Weaknesses

- There is a shortage of skilled eye health professionals, especially ophthalmologists and optometrists.
- Many volunteers serve for years without pay or formal recognition.
- While the MoH has mechanisms in place to supervise staff, mentorship and continuing professional development (CPD) opportunities are limited.
- Staff are unevenly distributed, with most concentrated in urban and regional hospitals.
- Incentive systems are often inadequate in attracting or retaining staff in rural districts.

Service Delivery

Strengths

- All regional and district hospitals now have established eye units, expanding geographical coverage.
- A functioning hub-and-spoke referral model links primary care units to higher-level hospitals.
- Strong patient satisfaction and growing community trust in eye care services.
- Effective community outreach activities supported by partners expand access in rural areas.
- Integration of cataract and glaucoma services into hospital service packages.

Weaknesses

- Routine eye health services depend heavily on donor funding and remain insufficiently integrated into broader care systems, raising concerns about sustainability.
- Inadequate infrastructure, with limited space to accommodate the volume of patients, and poor waiting facilities in many eye units.
- Although a functioning referral mechanism is in place, follow-up across levels of care remains a challenge.
- Inconsistent service quality due to staff shortages and uneven equipment availability.
- Limited integration of eye care into broader primary health care services at the peripheral health unit (PHU) level.
- Geographic and financial barriers continue to hinder access for remote and poor populations.

Medical Products, Vaccines, and Technologies

Strengths

- Basic ophthalmic equipment is in most regional and district hospitals.
- There is a regular supply of medicines and consumables, supported by donor funding.
- Good community confidence in the quality of medicines obtained from hospital pharmacies.

- Integration of ophthalmic commodities into national supply planning through mSupply is underway.

Weaknesses

- Essential eye medicines, especially anti-glaucoma drugs and spectacles, frequently run out.
- The national system for forecasting, procurement, and distribution of ophthalmic products is severely constrained by limited funding.
- Structured maintenance and repair system for ophthalmic equipment is inadequate.
- Dependence on external donations for equipment supply and replacement.
- Limited technical capacity among biomedical engineers to service or calibrate specialised devices.
- Weak linkage between facility-level pharmacy systems and national supply chain data.

Health Information Systems

Strengths

- Eye health indicators are now incorporated into DHIS2, enabling routine data collection on these indicators in most health facilities and thereby improving national visibility.
- Growing awareness among staff of the importance of data for planning and reporting.
- Existence of monitoring and evaluation officers at the district level supporting data compilation.

Weaknesses

- Availability and use of eye care-specific forms are inconsistent; some facilities revert to basic forms capturing limited eye health data.
- Weak feedback loops between district, regional, and facility levels.
- Limited data analysis and utilisation for decision-making at all levels.
- Overreliance on partners for data management and reporting.
- Inadequate routine supervision and data quality audits within the MoH.
- Minimal use of information for budgeting or advocacy for eye health.

Cross-Cutting Observations

Systemic Strengths

- Strong collaboration between the MoH and development partners continues to underpin programme delivery and technical support.
- The presence of a dedicated policy and strategy framework provides a solid foundation for integration into UHC.
- Community outreach, radio sensitisation, and engagement with local stakeholders have increased public awareness of eye health.

Systemic Weaknesses

- Lack of effective coordination between national and district levels limits efficiency.
- Supportive supervision and feedback mechanism requires strengthening to enhance data quality, accountability, and ownership at all levels.
- Persistent inequities in access remains, particularly among rural, poor, and older populations, highlighting the need for inclusive service planning and equitable resources allocation.

Introduction

Visual impairment is a major public health challenge worldwide. It affects over 2.2 billion people, with at least 1 billion cases being preventable or treatable (3). In low- and middle-income countries, such as Sierra Leone, the burden of avoidable blindness and vision loss impedes productivity and quality of life, especially among older adults and rural populations (4). Cataracts, uncorrected refractive errors, and glaucoma remain the leading causes of blindness, compounded by limited access to quality care and uneven service coverage nationwide (4, 5).

Sierra Leone's health system, recovering from years of fragility caused by conflict, the Ebola epidemic, and the COVID-19 pandemic, is in a phase of active rebuilding and reform. The government has made Universal Health Coverage (UHC) a national priority and aims to make healthcare affordable and accessible for everyone (5). Eye health has gained greater policy attention following the publication of the National Eye Health Policy (2021–2030) and the National Eye Health Strategic Plan (2024–2030) (6), which together outline the government's roadmap for strengthening governance, workforce development, service integration, and equitable access to eye care.

Sightsavers alongside other NGOs, and in partnership with the Ministry of Health (MoH), has supported the evolution of Sierra Leone's eye care system over the past decade. This partnership has helped to establish district-level units, expand cataract surgical services, and integrate eye health indicators into the DHIS2. Despite these achievements, significant challenges persist in financing, workforce retention, infrastructure maintenance, and coordination between central and district structures. Understanding these systemic gaps remains crucial to achieving sustainable and equitable eye-care delivery.

Rationale

The Eye Health System Assessment (EHSA) methodology and tool was developed by a consortium of eye care and health experts coordinated by the International Centre for Eye Health (ICEH) at the London School of Hygiene and Tropical Medicine (LSHTM) with funding from Sightsavers. The tool is based on the six blocks of the World Health Organization (WHO) framework for strengthening health systems and aims to identify strengths and weaknesses in eye care service provision within the wider health system context. The EHSA for Sierra Leone was first undertaken in 2013. The current assessment evaluates progress made since then (1). Given significant developments in national policy, strategic planning, service delivery, and health systems integration occurred in the past decade, this assessment provides a timely opportunity to assess how these changes have influenced the eye health landscape.

This follow-up assessment aims to examine improvements, identify persistent gaps, and highlight new priorities required to achieve sustainable and equitable eye care for all. It assesses system performance across the WHO's six building blocks, determining where gains have been made and where further action is needed to strengthen governance, financing, human resources, service delivery, medical products, and health information systems.

By documenting progress and challenges, the EHSA supports the MoH and partners to align future investments with the National Eye Health Strategic Plan (2024-2030). The assessment also ensures that national programming remains evidence-driven, locally owned, and focused on delivering integrated, sustainable eye health services within the UHC framework.

Country profile

Sierra Leone is a West African nation bordered by Guinea and Liberia, with an estimated population of 8.5 million in 2023 (7). The country is administratively divided into five regions and 16 districts. Health services are delivered through a three-tier system comprising primary, secondary, and tertiary care facilities, guided by the Basic Package of Essential Health Services (BPEHS) (5).

The MoH oversees the health sector, with service delivery implemented through district health management teams (DHMTs). Eye care is integrated under the Directorate of Primary Health Care, and the National Eye Health Programme (NEHP) (formerly National Eye Care Programme, NECP) provides strategic oversight in collaboration with partners.

According to the 2021 Rapid Assessment of Avoidable Blindness (RAAB), the prevalence of blindness among adults aged 50 years and above was 5.4%, with a further 2.9% experiencing severe visual impairment, with cataract, uncorrected refractive error, and glaucoma being the primary causes (8). This survey highlighted strong regional disparities in service access and emphasised the need for enhanced community-based detection, rehabilitation, and assistive-device provision.

Legal Framework Guiding the Health Sector

The legal and policy environment of Sierra Leone's health system is anchored in the 1991 Constitution of the Republic of Sierra Leone, which guarantees the right of citizens to health and access to essential social services. The Public Health Ordinance (1960), though outdated, remains the primary legislative instrument governing disease control, sanitation, and public health enforcement. Complementary frameworks such as the Hospitals Board Act (2003), Sierra Leone Teaching Hospital Act of 2016, and the Pharmacy and Drugs Act (2001) regulate facility governance, pharmaceutical control, and professional standards.

The MoH has, in recent years, updated its policy architecture to align with global health commitments, including the UHC 2030 Agenda, the Sustainable Development Goals (SDGs), and the WHO Global Action Plan for Eye Health 2023-2030. The National Health Sector Strategic Plan (NHSSP 2021-2025) (5) provides the overarching direction for the health sector, focusing on strengthening primary health care, improving human resource capacity, and enhancing governance and accountability. Within this broader framework, the National Eye Health Policy (2021-2030) and the National Eye Health Strategic Plan (2024–2030) (6) constitute the main instruments guiding the organisation, coordination, and delivery of eye health services. These documents articulate a national vision to reduce avoidable blindness, integrate eye care within the Basic Package of Essential Health Services (BPEHS), and promote equity through community-based service delivery.

Demographic profile

Approximately 55.4% of Sierra Leone's population resides in rural areas and 44.6% live in urban centres (10), including the capital, Freetown. The population is predominantly youthful, with 42% under the age of 15 and only 4% aged 65 years and above (9).

Life expectancy has gradually improved to 61 years in 2021, up from 55 years in 2010, reflecting the post-war recovery of the health system and expansion of maternal and child health services (8). However, Sierra Leone continues to face high maternal and under-five mortality rates, among the highest globally, alongside an increasing prevalence of NCDs, including hypertension, diabetes, and ocular conditions such as cataract, uncorrected refractive errors and glaucoma (5). The country's demographic distribution has implications for eye health, as the ageing population, growing urbanisation, and persistent poverty contribute to the burden of vision impairment.

Health System Overview

Sierra Leone operates a three-tier health system comprising primary, secondary, and tertiary care levels, with the goal of delivering integrated, equitable, and quality health services to all citizens.

- Tertiary level: National referral hospitals, such as Connaught Hospital in Freetown, host specialised eye units and training programmes, serving as centres for advanced ophthalmic care, training, and research.
- Secondary level: District hospitals serve as referral points for peripheral health units (PHUs), providing more specialised services such as cataract surgery, diagnosis, and management of common eye conditions.
- Primary level: PHUs form the foundation of primary care service delivery, providing preventive, promotive, and basic curative care, including primary eye care and community outreach. PHUs are organised at three levels: Maternal and Child Health Posts (MCHPs) in villages (population <5,000), Community Health Posts (CHPs) in small downs (5,000-10,000 population), and Community Health Centres (CHCs) at the chiefdom level (10,000-20,000 population).

The healthcare delivery strategy in Sierra Leone is guided by the BPEHS 2020, which defines priority interventions and services at each level of care. Eye health is recognised within the BPEHS as part of NCDs and disability inclusive services, though integration into primary health care remains partial.

The DHMTs are responsible for planning, implementing, and monitoring service delivery at the district level, supported by the Local Councils under the decentralisation framework. Despite progress in service expansion, the system faces persistent constraints, including workforce shortages, financing gaps, weak supervision, and reliance on donor support for vertical programmes such as eye care and neglected tropical diseases (NTDs).

Organisational Structure of the Ministry of Health

The MoH is the primary government agency responsible for health policy formulation, coordination, and service delivery oversight. The MoH is headed by the Minister of Health, supported by the Chief Medical Officer (CMO) and several Directorates and Programmes.

The Ministry's organisational framework includes:

- Directorate of Primary Health Care: Oversees community and preventive health services, including the NEHP.
- Directorate of Disease Prevention and Control (DPC), which oversees infectious disease prevention and control, including river blindness.
- Directorate of Hospitals and Ambulance Services: Responsible for hospital governance, referral systems, and specialised medical services.
- Directorate of Human Resources for Health (HRH): Manages recruitment, deployment, and training of health personnel.
- Directorate of Planning, Policy, and Information (DPPI): Leads health-sector planning, monitoring and evaluation, and DHIS2 data management.
- Directorate of Drugs and Medical Supplies (DDMS): Oversees procurement, distribution, and regulation of pharmaceuticals and medical equipment.

The NEHP sits within the Directorate of Primary Health Care and serves as the technical arm of the ministry responsible for eye health coordination, policy implementation, and monitoring. The NEHP collaborates closely with international and local partners in implementing activities as outlined in the National Eye Health Strategic Plan (2024-2030).

At the district level, the DHMTs serve as the implementing arm of the ministry, coordinating local health services and ensuring integration of vertical programmes, into district operational plans.

The overall governance structure links national policy direction with district-level implementation through a decentralised, yet centrally supervised, system. While coordination and reporting structures have improved over the past decade, accountability mechanisms, data feedback loops, and inter-departmental collaboration remain areas requiring further strengthening.

Objectives of the EHSA

Overall Objective

To assess the current functionality, capacity, and integration of Sierra Leone's eye health system using the WHO Health Systems Framework.

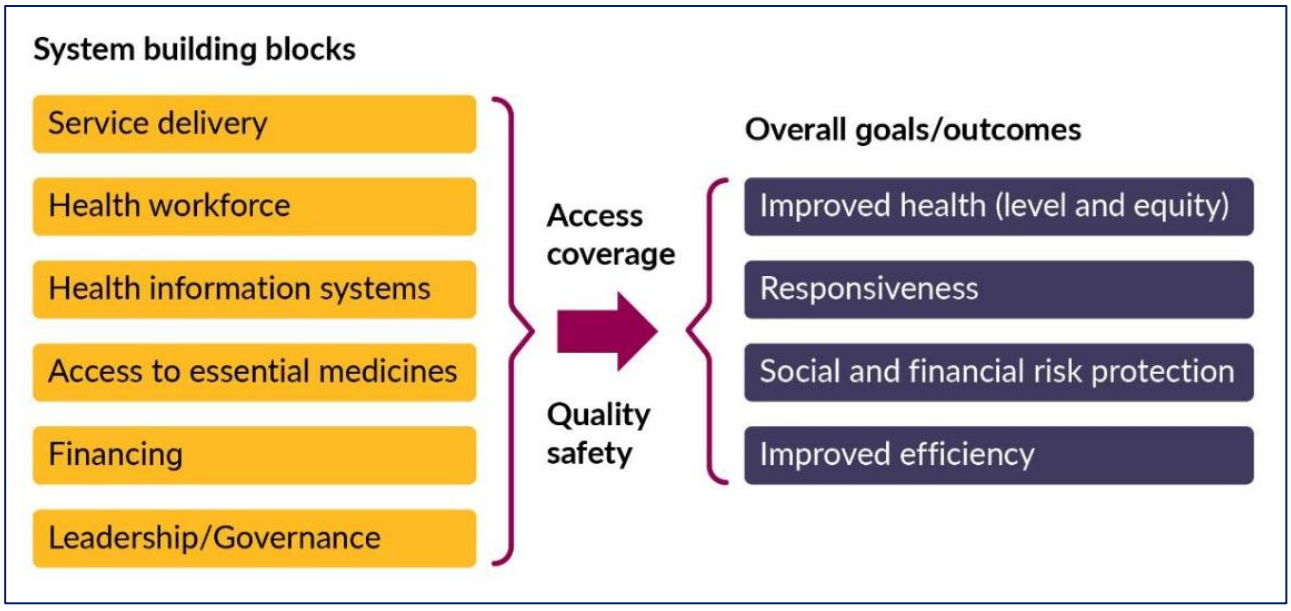
Specific Objectives

1. To evaluate leadership and governance structures supporting national and district-level coordination of eye health.
2. To review current financing mechanisms and the sustainability of eye health funding.
3. To assess the availability, distribution, and capacity of the eye health workforce.
4. To examine service delivery models, referral systems, and community outreach mechanisms.
5. To review the availability and management of ophthalmic medicines, consumables, and equipment.
6. To assess the collection, reporting, and use of eye health data within the DHIS2 system.
7. To identify cross-cutting enablers and barriers to the integrating eye health within primary and secondary care.

Analytical framework

This assessment applied the WHO Health System Building Blocks Framework (figure 1) as the principal analytical lens. The six interconnected blocks (leadership and governance; health

Figure 1: WHO Health Systems Building Blocks Framework



Source: WHO, Everybody's business: strengthening health systems to improve health outcomes (2007).

financing; health workforce; service delivery; medical products and technologies; and health information systems) were examined in relation to the national and sub-national structures governing eye health.

Methods

Study design

The EHSA for Sierra Leone adopted a mixed-methods qualitative design. A document review was conducted in July 2025. This identified and analysed relevant documents, including project reports, government policies and guidelines, and reports from international agencies. To validate and deepen the findings from this review, field-level data collection across selected districts explored operational realities, bottlenecks, and enablers of eye care delivery within the public health system.

Comparisons with the 2013 EHSA were drawn by mapping the current findings against the earlier assessment's indicators and recommendations under each WHO health system building block. This helped identify progress achieved, areas of stagnation, and new challenges that have emerged since the previous review.

Study area

Fieldwork was conducted across three regional hubs: Bo (Southern Region), Kenema (Eastern Region), and Makeni (Northern Region), which collectively represent diverse demographic, infrastructural, and service-delivery contexts within Sierra Leone.

These locations were purposively selected to allow comparison with the 2013 EHSA and based on: functioning district eye care units and active outreach programmes; variations in service accessibility and resource allocation; and existing partnerships with local and international organisations supporting the NEHP. At each site, interviews and focus group discussions (FGDs) were held with DHMT staff, hospital management, ophthalmic clinicians, nurses, and patients to capture perspectives across the service continuum.

Study population

The study targeted a wide range of actors involved in planning, financing, managing, and delivering eye health services. Participants included:

- National-level stakeholders: MoH leadership officials, NEHP focal persons, development partners, and representatives of professional associations.
- District-level stakeholders: DHMT coordinators, ophthalmic nurses, and hospital administrators.
- Facility-level staff: ophthalmologists, optometrists, nurses, and CHOs.
- Community members and patients: users and non-users of eye care services, including persons with disabilities.

In total, the study engaged over 50 respondents through interviews and focus groups, ensuring representation from both urban and rural perspectives.

Sample and sampling techniques

The study targeted a wide range of actors involved in planning, financing, managing, and delivering eye care services. A purposive sampling strategy was employed, consistent with qualitative research methods. Participants were selected based on their involvement in or knowledge of eye care delivery, policy, or financing. The sample composition ensured coverage of different health system levels and institutional roles. The focus groups comprised between 6-10 participants each, while KIIs were conducted with individual informants at district and national levels. Sampling continued until thematic saturation was achieved, ensuring depth of data without redundancy.

Data collection

Data collection was conducted between June and July 2025. A set of semi-structured interview guides was developed, reflecting the WHO health systems framework and contextual priorities identified during the document review.

- KIIs: Conducted with policymakers, programme managers, clinicians, and technical officers, focusing on leadership, coordination, financing, and service integration.
- Focus group discussions: Conducted with health workers and patients to explore experiences, challenges, and perceptions of quality, accessibility, and affordability.

Interviews and focus groups were facilitated in English or Krio, depending on participants' preference, and were audio-recorded with consent.

Data management and analysis

Recordings were transcribed verbatim and entered into a qualitative data matrix. Data analysis followed the thematic framework approach, structured around the six WHO building blocks. Each transcript was coded manually, and themes were derived inductively and deductively. Data were triangulated across respondent groups and validated against the document review findings. This process generated a holistic understanding of the eye health system's functionality, interdependencies, and gaps, providing both vertical coherence (national to facility) and horizontal comparability (across building blocks).

Ethical approval

Ethical approval was obtained from the Office of the Sierra Leone Ethics and Scientific Review Committee under the MoH (SLESRC No: 031/01/2025). All participants were informed of the study's objectives, voluntary nature, and their right to withdraw at any point. Informed consent was obtained before participation. Confidentiality and anonymity were upheld through de-identification of transcripts, and all data were securely stored on password-protected devices accessible only to the research team.

The EHSA assessment team

This assessment was conducted jointly by the MoH, Sightsavers Sierra Leone Country Office, and an independent consultant with expertise in health systems and qualitative research. The team benefited from the participation of individuals who were also involved in the 2013 EHSA, which strengthened the analytical process by enabling comparison, reflection on progress, and contextual

interpretation of change over time. The assessment was further supported by DHMT focal points and field coordinators during data collection and validation stages.

Results

Eye health governance and leadership

National-Level Leadership and Coordination

At the national level, eye health governance is coordinated under the Directorate of Primary Health Care, where the NEHP provides technical guidance, coordinates donor inputs, and connects the government with development partners. Since 2013, the NEHP has strengthened its position within the MoH, increasing credibility and policy influence.

Key informants described this coordination structure as functional but overly centralised. While 2013 findings highlighted the absence of regular coordination meetings and the limited role of national committees such as VISION 2020, recent years have seen more structured engagement through periodic partner reviews and inclusion of eye health in MoH planning sessions. However, the centralisation of decision-making, especially around budgets, training, and deployment, means district and facility actors often have minimal input or insight into planning and resource allocation. This limited involvement can affect local implementation and responsiveness to district-specific needs.

Progress since 2013 is evident in three main areas:

- The continuity of the NEHP, despite leadership transitions, has helped build and sustain institutional memory.
- Stronger collaborative relationships have been built with development partners, aligning eye health more closely with national health priorities.
- The shift from ad hoc donor projects towards a nationally endorsed strategy reflects the growing government stewardship.

Nonetheless, the NEHP's placement within the Directorate of Primary Health Care weakens its authority to influence cross-cutting areas such as human resources, pharmaceuticals, and health financing due to competing priorities within the Directorate. Unlike in 2013, when the NEHP lacked a defined inter-directorate mechanism, the current arrangement shows tentative progress toward integrated decision-making, though enforcement power remains weak**.** Without an inter-directorate coordination mechanism or dedicated technical working group, the NEHP's decisions often lack the enforcement leverage to shape resource allocation or policy prioritisation across the MoH.

Subnational Leadership and District Coordination

At the subnational level, leadership responsibilities rest with the DHMTs, which oversee planning, supervision, and integration of eye health services into district operations. The district medical officer (DMO) typically provides administrative oversight, while a designated district eye care focal person or hospital-based coordinator leads day-to-day service delivery. In 2013, coordination at the district level was largely informal and dependent on the personal initiative of eye care staff. Since then, there has been visible progress toward formalising leadership roles and integrating eye health into district planning processes.

Respondents from Bo, Tonkolili, Moyamba, and Makeni districts described regular coordination meetings between the DHMT and hospital eye units, including review sessions where outreach plans, patient data, and logistics are discussed. This represents a clear improvement from 2013, when such meetings were irregular and often donor-initiated rather than government-led.

Nevertheless, these mechanisms remain fragile, as they rely heavily on individual leadership and partner facilitation. In several districts, eye care focal persons lack formal recognition in the DHMT organogram, thereby limiting their authority over planning and budgetary decisions.

Since 2013, the scope of district-level collaboration has expanded. Previously, eye health activities were concentrated in a few districts with resident ophthalmic nurses. Today, districts have some form of designated coordination mechanism, though still dependent on partner support for fuel, supervision, and outreach. However, the persistence of donor-driven activity cycles echoes earlier findings from 2013, suggesting that decentralisation has progressed in structure but not yet in financial autonomy. The absence of ring-fenced district budgets for eye health continues to constrain proactive planning and service continuity between donor-funded projects.

Overall, the 2025 assessment finds that district-level leadership has evolved from reactive service support to emerging programmatic coordination. Yet, as in 2013, sustained impact will depend on institutionalising these gains through clearer mandates, budget allocation, and formal performance reporting mechanisms. Strengthening the link between the NEHP and DHMTs, particularly through scheduled supervision and data feedback, remains essential to bridging the gap between national priorities and frontline delivery.

Partnership and Stakeholder Engagement

Partnerships have remained central to the evolution of Sierra Leone's eye health system, serving as both an enabling and constraining factor in governance. In 2013, coordination between the MoH and development partners such as Sightsavers, Helen Keller International, and the Sierra Leone Association of the Blind (SLAB) was largely informal, with limited strategic alignment. The 2025 assessment shows that these relationships have since matured into structured partnerships anchored within the NEHP, enabling stronger policy coherence and shared planning.

Sightsavers continues to serve as the lead technical and financial partner, supporting training, equipment procurement, outreach, and monitoring. Other partners, including Vision Action and local NGOs, have contributed to outreach and community engagement. Compared to 2013, when partners were often perceived as operating parallel systems, there is now greater harmonisation of efforts through joint work planning, periodic reviews, and integration within the MoH strategic framework. The NEHP's leadership of the Eye Health Technical Working Group has created a formal platform for dialogue among government, partners and civil society.

Civil society participation has also expanded. While the 2013 EHSA reported limited involvement of Disabled People's Organisations (DPOs) and Civil Society Organisations (CSOs) in planning and governance, organisations such as SLAB and the Health for All Coalition now play an active role in advocacy, awareness, and accountability. They participate in national consultations and contribute to campaigns promoting inclusive access to eye care and disability rights. Their growing engagement aligns with the broader governance reform agenda promoting citizen participation in health.

Despite these advances, the partnership landscape remains characterised by dependency. As in 2013, donor partners still drive much of the operational and financial backbone of eye care delivery in the region. Government ownership, though improved, remains partial, with key decisions on resource allocation, training, and logistics often influenced by donor priorities. This dynamic has reinforced the perception that eye health is still externally funded rather than domestically led.

Moving forward, governance reforms should prioritise transitioning from donor coordination to co-leadership, ensuring that the MoH defines national priorities while partners align resources accordingly. Strengthening the institutional capacity of the NEHP to lead resource mobilisation, manage partnerships, and coordinate multi-sectoral collaboration will be essential to achieving a sustainable and locally owned eye health system.

Policy Frameworks and Strategic Alignment

The policy and strategic environment for eye health in Sierra Leone has evolved significantly since the 2013 EHSA. At that time, the country lacked a formalised national eye health policy or strategy, and eye care activities were guided largely by the VISION 2020 framework and partner-led operational plans. By contrast, the 2025 assessment finds that a comprehensive National Eye Health Policy (2021-2030) and a detailed Strategic Plan (2024-2030) are now in place, providing a structured long-term vision and aligning eye health with national and global frameworks.

These policy documents articulate clear goals for integrating eye care into primary health care, expanding the workforce, strengthening data systems and evidence-based planning, and promoting cost-recovery and sustainable financing. This marks a notable improvement from 2013, when the absence of policy direction constrained coordination and accountability. The establishment of these frameworks has provided legitimacy to the NEHP and clarity on national priorities.

However, implementation has been uneven. Monitoring of strategic indicators has not yet begun, and while there is a dedicated budget line within the MoH, funding to operationalise commitments remains inadequate. Similar to 2013, when the lack of an operational plan limited follow-through on VISION 2020 objectives, the current policy risk lies in weak execution capacity rather than policy intent. The translation of strategic goals into district-level work plans remains inconsistent, often dependent on partner-funded initiatives rather than government-financed programmes.

Compared to 2013, Sierra Leone has moved from an environment of policy absence to one of policy presence, albeit partial implementation. This evolution demonstrates greater national ownership and vision, yet underscores the need for stronger institutional mechanisms, cross-sectoral coordination, and clear accountability to transform written commitments into measurable progress.

Supervision, Accountability, and Decision-Making

Supervision and performance management for eye care remain a persistent challenge, although notable improvements have occurred since 2013 EHSA. In 2013, supervision of eye care activities was largely ad hoc, irregular, and almost entirely partner-led, with minimal MoH oversight. The 2025 assessment finds that while supervision is still uneven, more districts now benefit from structured review mechanisms and feedback processes, signalling progress toward institutionalising accountability within the health system.

Facility-level staff continue to report that technical supervision is primarily provided through development partners, particularly during outreach and training exercises. However, in contrast to 2013, where MoH involvement was nearly absent, several districts now receive joint supervisory visits conducted by NEHP and DHMTs. These visits, though infrequent, are viewed positively by staff, reinforcing a sense of government presence and recognition of their work. As one provider noted, “when national officers come, it shows that government values what we do.”

Despite this progress, supervision still lacks consistency, frequency, and formal documentation. The 2013 report highlighted weak accountability systems and limited follow-up on supervisory findings, challenges that persist today. Many supervisory visits remain focused on administrative checks rather than technical mentoring or problem-solving. Moreover, eye care indicators are rarely integrated into performance appraisal frameworks, limiting their visibility in broader health system reporting.

Decision-making also remains predominantly top-down. District-level planning meetings tend to prioritise national health priorities such as malaria or maternal health, leaving little room for eye care in agenda-setting. While this replicates patterns identified in 2013, there is emerging evidence of local initiative, for example several DHMTs now include eye care in quarterly review meetings or incorporate eye data into district performance plans. These incremental steps suggest growing

awareness of the need to embed eye health in district management cycles, even if decision-making authority remains centralised.

Overall, compared with the 2013 assessment, the supervision and accountability environment has shifted from near absence to partial institutionalisation. However, full ownership and regularised monitoring by the MoH are still required to consolidate these gains and ensure that eye health supervision becomes an integral component of national and district health governance structures.

Data Use for Governance

Effective governance depends on systematic use of reliable data to guide planning, supervision, and resource allocation. In 2013, the EHSA identified major data gaps; reporting was paper-based, inconsistent, and fragmented across facilities, with no standardised national platform for collating eye care indicators. The 2025 assessment shows tangible progress in this area, particularly through the integration of core eye health indicators into the DHIS2.

This represents a major structural improvement compared to 2013, when the absence of a digital reporting platform limited national oversight. Eye care indicators such as cataract surgeries, visual impairment cases, and refractive error consultations are now incorporated into DHIS2, allowing for national-level visibility. Additionally, some districts have begun conducting regular data review meetings to discuss service trends and identify gaps, a practice that was virtually absent during the first EHSA.

However, persistent operational challenges mirror those documented in 2013. Facilities continue to depend heavily on manual data collection tools, including the specialised "*Health Form 13*" (eye care-specific health form), which is frequently unavailable. Reporting remains incomplete and uneven, particularly from peripheral units, due to staff turnover and limited training on data management. At the national level, analysis and feedback mechanisms are still weak, data is collected and uploaded but seldom synthesised into actionable insights for planning or budgeting.

Compared with 2013, data systems have evolved from fragmentation to partial integration, but utilisation remains limited. While integration into DHIS2 marks a critical milestone, the absence of a structured process for interpretating and using data means that information often serves reporting purposes rather than informing decision-making. Strengthening analytic capacity within the NEHP and DHMTs, ensuring consistent feedback loops, and linking performance indicators to supervision and budget processes will be essential to realising the full governance potential of the data system.

Evolution Since 2013

The evolution of eye health governance and leadership in Sierra Leone since the 2013 EHSA demonstrates both structural and functional progress, though important systemic gaps remain. In 2013, the NEHP operated primarily through partner-driven mechanisms, lacked formal policy frameworks, and had minimal institutional visibility within the MoH**.** By 2025, eye health has gained formal recognition within the Directorate of Primary Health Care, supported by a national policy and strategy, a clearer leadership structure, and partial integration into district planning mechanisms.

Key areas of progress include:

- Establishment of the NEHP with defined leadership, which did not exist in 2013.
- Development and endorsement of the National Eye Health Policy (2021–2030) and Strategic Plan (2024–2030).
- Increased coordination between the MoHS and partners through structured meetings and joint supervision.
- Gradual decentralisation of responsibilities to DHMTs, enabling local integration of eye care activities.

However, some challenges identified in 2013 persist in modified form**.** While governance structures are stronger, decision-making remains overly centralised, and donor dependency continues to shape programme implementation. Supervision and accountability mechanisms have improved but lack consistency, and data, though better integrated, is still underutilised for strategic decision-making. Additionally, the dedicated budget line for eye health remains inadequate, mirroring the financial constraints highlighted in 2013.

Overall, the governance and leadership landscape has transitioned from a partner-led model in 2013 to a government-coordinated but donor-supported system in 2025. The direction of change is positive, showing clearer institutional identity, improved coordination, and policy alignment but sustainable progress will depend on deepening national ownership, strengthening accountability, and ensuring that governance reforms translate into tangible system-wide improvements.

Key Challenges and Bottlenecks

The leadership and governance analysis reveals persistent challenges that constrain progress:

1. Limited institutional autonomy: The NEHP's current position within the Directorate of Primary Health Care restricts its influence across key directorates and budget structures.
2. Inadequate financing: Limited funding is allocated for eye health in the national budget line, and as such, policy commitments remain unfunded.
3. Weak accountability mechanisms: Supervision and performance reviews are irregular and mostly donor led.
4. Data underutilisation: Weak use of DHIS2 data for strategic decision-making.

Eye health financing

Funding Sources and Financial Flows

Sierra Leone's eye health programme continues to rely on a small and fragile funding base. In 2013, the system was almost entirely donor-dependent, with Sightsavers and faith-based organisations, such as Baptist Eye Hospital, Lunsar (BEHL), and United Methodist Church, Kissy (UMC Kissy), bearing the cost of operations, equipment, and training. Over a decade later, this dependency remains, though government salary contributions have increased modestly.

International development partners cover most operational costs including training, outreach, procurement of ophthalmic supplies, and equipment maintenance. While Vision Action previously supported select programmes, only Sightsavers through its grant from Irish Aid and other donations continues to provide large scale and predictable funding, including community level health promotion and awareness campaigns.

The Government of Sierra Leone, through the MoH, contributes primarily to staff salaries, utilities, and facility maintenance, but the dedicated budget line for eye health commodities or operational costs is still insufficient, as was observed in 2013. At facility level, small-scale cost recovery from drug sales provides supplementary income, but these revenues remain inconsistent and insufficient to cover recurrent costs. The flow of funds remains centralised through the NEHP, echoing the 2013 structure, resulting in recurrent delays, limited transparency, and constrained district-level autonomy.

Cost Recovery and Patient Contributions

Affordability continues to shape access to eye care services. As of 2025, the Free Health Care Initiative (FHCI), which protects pregnant women, lactating mothers, and children under five, has been expanded to include Ebola Survivors and the elderly, who are the primary users of eye care. However, service coverage is limited, due to insufficient funding and high volume of patients receiving this free or subsidised care. While some patients report being able to afford contributing to the cost of services, widespread poverty limits real capacity to pay.

Facilities use cost-recovery funds to purchase drugs and consumables, therefore creating a self-financing loop. However, as documented in 2013, the absence of standardised fees and lack of cross-subsidisation mechanism continue to undermine equity. FHCI beneficiaries form a large proportion of service users, thus limiting income generation. Furthermore, low household income and informal exemptions for indigent patients reduce sustainability. Despite these constraints, cost recovery remains vital for daily operations in the absence of government financing.

Role of Donor Financing

Donor funding remains a critical source of income for the eye health system in Sierra Leone. The 2013 EHSA noted reliance on Sightsavers, CBM and Helen Keller International. In 2025 Sightsavers was the largest funder, with a reduced number of donor partners. Sightsavers continues to finance training, procurement, and service delivery and has facilitated expansion from a handful of hospitals in 2013, to functional eye care units in almost every district.

However, the same vulnerabilities persist. Funding cycles are short-term and activity-based, leading to episodic disruptions in service delivery when donor funds lapse. District teams continue to note that "when the partner stops, the service stops." This donor-led financing pattern limits government ownership and long-term planning.

Government Financing and Fiscal Space

In 2023, current health expenditure was 4.7% of Gross Domestic Product (GDP), a decrease from 8.5% in 2013. However, within current health expenditure the share of domestic general government health expenditure has increased from 7.0% in 2013 to 16.7% in 2023 (11). In 2013, budgetary allocations for eye health were minimal and inconsistently disbursed. Unfortunately, in 2025, resource allocation for eye health care within the MoH or local councils remains inadequate. This lack of sufficient funding in the national budget has several consequences:

- No predictable domestic financing for essential medicines or equipment.
- Limited capacity to plan or implement outreach without partner support.
- Inability to retain staff or provide financial incentives at facility level.

Eye care financing competes with other high-burden conditions such as malaria and maternal health. While small allocations have occasionally been made through central budgets, they are irregular and insufficient to fund programme delivery. At the district level, eye health is not yet integrated into local development plans, and DHMTs rely heavily on donor-funded activity grants, perpetuating a dependency cycle.

Equity and Financial Protection

Equity concerns identified in 2013 persist. The FHCI covers specific groups and leaves many adults exposed to high out-of-pocket expenses. Out-of-pocket payments account for 54.8% of current health expenditure in Sierra Leone (11), and less than 1% of the population is covered by any social health protection scheme (12). No functional health insurance mechanism exists; the proposed Sierra Leone Social Health Insurance (SLeSHI) scheme remains under discussion. With no mechanisms for risk pooling or financial protection for eye health, this leaves households exposed to catastrophic health expenditure or untreated eye conditions, particularly among older adults.

Efficiency and Accountability

The 2013 EHSA noted poor financial tracking and delayed disbursement, these issues remain largely unchanged. Financial management for eye health is limited by weak transparency and fragmented accountability. District and facility-level staff reported little insight into how funds are allocated or tracked. Donor funds are often managed centrally, and local implementers receive activity-based disbursements without detailed expenditure breakdowns.

While some facilities maintain basic ledgers for cost-recovery revenue, there is no standardised financial reporting framework specific to eye care. Periodic audits are conducted at the hospital level but rarely disaggregated by programme. As such, financial data are not systematically used to inform planning or performance management.

This weak accountability structure undermines efficiency. For example, slow release of funds from the NEHP to regional eye units often delays outreach campaigns, leading to underutilisation of staff and resources. A lack of coordination between the NEHP, DHMTs, and procurement units further complicates timely acquisition of essential medicines.

Key Challenges and Bottlenecks

The financing analysis identifies several persistent constraints:

- Overdependence on donor funding, with majority of programme costs externally financed.
- Insufficient funding for eye health in the national budget and difficulty around the MoH disbursing funds.
- Weak financial reporting and delayed fund disbursement from national to district levels.
- Low capacity for cost recovery due to the high volume of FHCI beneficiaries.
- Lack of mechanisms for financial protection for individuals that fall outside FHCI.

Since 2013, the financing landscape shows modest improvements in geographic coverage and integration within broader MoH structures, but no fundamental shift in financial sustainability. The system remains highly donor-dependent, with domestic financing and accountability frameworks yet to mature to ensure long-term resilience.

Human resources for eye health

Human resources for eye workforce

Human resources remain one of the most significant determinants of the strength and sustainability of Sierra Leone's eye health system. The sector continues to experience shortages of trained personnel across all cadres, particularly ophthalmologists, ophthalmic nurses, optometrists, and refractionists. Whilst the number of trained professionals has increased since 2013, from 66 to 97 in 2025, the growth has not kept pace with population needs. The number of ophthalmologists has increased from 3 to 6, ophthalmic nurses from 41 to 68, optometrists from 0 to 5, and optometrist technicians from 3 to 6. The eye health personnel now also includes 12 ophthalmic community health officers (CHOs) (1, 2). Yet, the overall ratio remains critically low and well below the levels recommended by the International Agency for the Prevention of Blindness (IAPB) for Africa. In addition, the growing population outpaces the government's efforts. For example, in 2013 Sierra Leone had three ophthalmologists serving a population of about 6 million. The IAPB recommended target for Africa is 4 ophthalmologists/surgeons per million. It means that to meet the population needs adequately, the country needed 24 ophthalmologists and had a gap of 21 ophthalmologists (1, 13). In 2025, with a population of 8.5 million, the country requires 34 ophthalmologists to reach the IAPB target; with 6 ophthalmologists available, it has a gap of 28 ophthalmologists.

The majority of secondary and primary-level eye care facilities rely on ophthalmic nurses, supplemented by a substantial proportion of unremunerated volunteer staff. Facility-level assessment conducted in this study indicated that volunteers constituted 40-80% of eye health workforce at each facility visited, reflecting a heavy dependence on informal labour to sustain routine service delivery. This heavy dependence on volunteerism undermines workforce stability and institutional continuity. In 2013, reliance on externally funded posts and volunteerism was already identified as a major constraint; by 2025, this challenge persists, though more structured collaboration with local councils and DHMTs has improved temporary deployment mechanisms.

Despite these challenges, the workforce demonstrates exceptional commitment. Health workers consistently described a deep sense of purpose in preventing avoidable blindness and expressed motivation derived from patient appreciation and the tangible impact of restored vision.

Training, Career Pathways, and Skills Development

Since 2013, notable progress has been made in building local training capacity. Ophthalmology training, once limited to overseas institutions, is now available through in-country residency programmes at Connaught Hospital in Freetown, with accreditation being explored with the West African College of Surgeons (WACS). This development represents a major shift in national capacity building from 2013, when no national ophthalmology training programme existed and all ophthalmologists were trained abroad.

Despite this progress, training opportunities remain irregular and heavily donor-dependent, echoing 2013 findings where ad hoc workshops substituted for structured training schemes. While a national scheme of service for eye health cadres does exist and was reported updated, this assessment indicated that awareness and understanding of the scheme remain limited across facilities and districts.

Partner organisations have continued to support training for ophthalmic CHOs, ophthalmic nurses, and primary care providers. Short-term refresher courses and clinical skills updates have also been provided intermittently. However, health workers noted that training remains largely donor-dependent and irregular, often contingent on external funding cycles rather than embedded within the MoH human resource development plan. Compared with 2013, when training for ophthalmic nurses and cataract surgeons was entirely externally funded, there is now some degree of MoH ownership and integration into national human resource planning, though sustainability remains uncertain.

At the community level, there is a persistent mismatch between training and deployment. Some CHWs have been trained to provide basic eye care, others provide services without formal ophthalmic training, while qualified CHOs and ophthalmic nurses are not always deployed where their skills are most needed. The absence of a structured national carrier pathway and standardized competencies across cadres has further limited opportunities for career progression and retention. This issue reflects ongoing fragmentation first identified in 2013, when weak linkage between training institutions, the NEHP, and service deployment was a key gap.

Since 2019 the MoH and Sightsavers, with funding from Irish Aid, have supported the national rollout of the WHO Primary Eye Care (PEC) training toolkit to strengthen eye care at the community level. Under the leadership of the national senior trainer, around 20 master trainers have been developed to cascade the primary eye care (PEC) curriculum to primary care workers across districts, with the PEC modules implemented across several districts, strengthening integration of eye care within primary health services. The MoH plans to scale up this training to all districts as part of the National Eye Health Strategic Plan (2024–2030), ensuring that every PHU has at least one PEC-trained provider. This initiative represents a key step toward institutionalising eye health within primary health care and addressing the capacity gap at peripheral facilities, marking one of the most tangible advances in human resource development since the 2013 baseline.

Distribution and Deployment

The distribution of eye health personnel is uneven, with significant urban-rural disparities. Urban areas such as Freetown, Bo, and Kenema host most trained staff, while remote districts such as Koinadugu, Tonkolili, and Kambia struggle to maintain adequate coverage. Some districts (e.g., Kabala, Moyamba, Pujehun) have no resident ophthalmologist or ophthalmic nurse, relying instead on visiting teams or outreach missions. While 2013 data showed that five of thirteen districts had no

eye health staff at all, 2025 findings show gradual progress, though geographic inequities remain pronounced particularly in the Northern and Western Area rural districts.

The hub-and-spoke referral system, which connects PHUs to secondary facilities such as Bo Government Hospital and Makeni Regional Hospital, has improved access but remains limited by workforce shortages. DHMTs cited that supervision and mentorship are often hampered by inadequate staffing and logistical constraints, particularly in reaching peripheral facilities. This reflects improvement from 2013, when there was no functional referral linkage and PHU engagement in eye care was largely ad hoc.

Efforts to integrate eye care into broader primary health care services are ongoing, but this integration is hindered by the limited number of trained eye care providers stationed at PHU level. In 2013, integration was largely aspirational; by 2025, some progress has been achieved through PHU staff rotations and training modules, though coverage remains partial.

Motivation and Retention

Motivation among eye-care workers is shaped by a strong sense of professional commitment but limited institutional support. Across interviews, respondents repeatedly described their love for the work and for preventing blindness as the primary reason for remaining in the sector despite limited career mobility, low pay, and poor recognition. Health workers cited patient appreciation and the visible impact of restored sight as major sources of personal motivation.

In 2013, concerns around limited career mobility, low pay, inadequate supervision and poor recognition were raised. These issues have largely remained unaddressed and personal job satisfaction coexist with significant frustrations around career trajectories, low pay, and minimal recognition from the MoH. Many described themselves as “forgotten” within the broader health system, as other programmes (e.g., maternal health) receive more frequent supervision, allowances, and training opportunities. In districts such as Bo and Makeni, staff noted that supervision and professional guidance come primarily from partner organisations, not from the MoH.

Working conditions remain challenging. Equipment shortages and stock-outs of essential drugs hinder service delivery and lower morale. Whereas the 2013 EHSA noted dependence on donors for equipment provision, the challenge has now evolved into maintenance and replacement, as many machines procured under projects have become obsolete. In several facilities, broken ophthalmic devices remain unrepaired for months due to the absence of biomedical technicians trained to service them. Health workers often purchase small consumables themselves to keep services operational. Respondents also mentioned that irregular salary payments and the lack of risk allowances further demotivate staff, especially those in rural postings.

Retention remains a pressing challenge. Many trained ophthalmic staff migrate to better-paying positions within NGOs or abroad. Within the public system, the absence of incentives, weak career pathways, and irregular salary payments have contributed to low retention and ophthalmology was not viewed as a lucrative career, discouraging doctors from entering the profession.

Volunteers, who form a large share of the functional workforce, remain unabsorbed into the formal MoH structure. While DHMTs recognize their contribution, limited fiscal space has constrained the government’s ability to formalize their employment. The prolonged volunteer status of many health workers, some exceeding seven years, has created a two-tier workforce of salaried and non-salaried providers. This represents little progress from 2013, when many ophthalmic staff were employed on donor grants rather than MoH payroll, highlighting persistent financing bottlenecks.

Supervision and support

From 2013 to 2025, supervision of eye health services shows limited changes. Supervision and performance monitoring for eye health personnel are uneven and fragmented. While DHMT are responsible for oversight, most supervision remains general rather than technical. Eye care-specific supervision is still largely partner-driven, with Sightsavers conducting periodic visits that also serve as mentoring opportunities. Unlike 2013, when the absence of supervision was total in most districts, some facilities (e.g., Bo and Makeni) now report joint DHMT-partner reviews. Conversely, the 2025 assessment showed there are some facilities (e.g., Moyamba) where less than two eye care focal persons exist, and is often responsible for coordinating service delivery, data collection, and reporting, with minimal administrative support. Compared with 2013, when supervision was almost entirely partner-led, 2025 shows modest MoH participation through the NEHP, but systematic oversight and performance management remain weak.

There is no standardised system for performance appraisal specific to eye care, and the lack of supervision and funding cycles has contributed to inconsistencies in data recording, patient follow-up, and adherence to treatment protocols. Respondents suggested establishing structured supervision schedules and competency assessments to strengthen accountability and professional standards.

Workforce Planning and Policy Alignment

Despite the inclusion of human resources for health (HRH) priorities within the National Eye Health Strategic Plan (2024-2030), implementation has been slow. The plan acknowledges the need for scaling up training, improving retention, and creating new cadres such as ophthalmic CHOs. However, these reforms are yet to translate into operational frameworks or budgetary allocations.

National policymakers recognised the necessity of a comprehensive HRH mapping for eye care to understand existing gaps in numbers, skills, and distribution. District respondents also highlighted the importance of integrating eye care workforce planning into broader DHMT staffing strategies, to avoid duplication and ensure efficient use of scarce human resources.

Continued role in funding training, supervision, and logistics by development partners has kept the workforce functional, but it also masks the underlying fragility of government-led systems. The absence of institutionalised human resource policies specific to eye care has left the system reliant on donor coordination and individual goodwill rather than on a sustainable national framework.

Key Challenges and Bottlenecks

- Persistent workforce shortages across all cadres, especially ophthalmologists and optometrists.
- Urban–rural inequities remain severe, with few trained providers serving remote districts.
- Dependence on volunteers undermines consistency and professional accountability.
- Training and supervision systems are fragmented, with donor-funded programmes driving most capacity building.
- Weak career pathways and incentives discourage specialisation in ophthalmology.
- Limited government absorption capacity prevents trained staff from being placed on the national payroll.
- Low retention rates due to migration and inadequate remuneration.
- Supervision and mentorship remain largely external, with little monitoring by the MoH.

In summary, Sierra Leone has moved from almost no in-country specialist training and extreme staff scarcity toward the early stages of a nationally anchored eye health workforce. However, human resources remain the weakest building block of the system. Sustained government financing,

structured career progression, and integrated supervision mechanisms are essential to build a resilient, motivated, and equitably distributed workforce.

Eye health service delivery

Service Availability and Access

Between 2013 and 2025, the geographical spread of eye care services has improved. Eye units now exist in all district hospitals, compared to fewer than ten a decade ago. This expansion reflects successful donor-supported infrastructure refurbishment and deployment of trained ophthalmic nurses to underserved areas. However, the Northern and remote Eastern districts remain underserved, echoing 2013 findings of persistent inequity**.** Populations in these areas continue to travel long distances to reach eye units, and outreach remains the only access point for many. Integration into primary health care remains partial, PHUs rarely conduct systematic eye screening or referrals due to lack of equipment and trained staff, despite the NEHP's vision of embedding PEC within the BPEHS framework.

The improved availability of eye units and mobile outreach efforts, mainly supported by external partners and donors, has helped more people in communities access eye check-ups and cataract surgeries. There is a growing number of health facilities providing cataract surgeries in the country, an improvement from seven facilities reported in 2013 assessment. Nonetheless, service provision remains uneven, constrained by limited infrastructure, inconsistent equipment availability, and weak referral and follow-up systems. The ongoing hub-and-spoke model, where regional hospitals serve as referral centres for peripheral facilities, has improved coordination over the years but remains partially institutionalised and highly dependent on both technical and financial donor support.

Outreach and Community Services

Outreach remains a defining feature of Sierra Leone's eye health system. Compared to 2013, outreach activities are more structured and integrated into district health plans, though still reliant on donor support. Donor partners continue to fund transport, consumables, and field allowances for outreach and cataract campaigns. Unlike a decade ago, where outreach was ad hoc and concentrated in faith-based organisation run hospitals, DHMTs now play a limited coordinating role, especially in Bo, Kenema, and Port Loko. Nevertheless, irregular funding and vehicle shortages persist, limiting consistency. In 2025, outreach is still conducted more frequently in urban and peri-urban zones than in remote areas, where transport costs remain prohibitive.

Cataract and Surgical Services

Cataract remains the leading cause of avoidable blindness in Sierra Leone (1, 4). Since 2013, the national cataract surgical rate (CSR) has increased modestly due to the expansion of trained surgeons and outreach campaigns. However, the country was far from attaining the International Vision 2020 recommended cataract surgical rate (CSR) for Africa of 2,000 surgeries per million population per year, reporting only 409 surgeries per million in 2015, the last year for which this data is available (14). Surgical volumes also remain uneven across districts. Whereas in 2013 most cataract surgeries were performed by faith-based organisations, such as BEHL, UMC Kissy, by 2025 several government facilities performed regular surgeries, including Bo, Kenema, and Makeni district hospitals, although the funding to support these is provided primarily by donors with the exception of staff salaries and facility utility bills.

This marks a positive shift towards system integration, though government units still rely heavily on external supply chains for consumables and intraocular lenses. Quality assurance mechanisms such as surgical audits and outcome monitoring remain weak. There is no national system for post-operative follow-up, replicating a key gap highlighted in 2013.

Specialised Services: Glaucoma, Refraction, and Low Vision

Little progress has been achieved in expanding specialised eye care. As in 2013, glaucoma diagnosis is available in most hospitals, but surgical treatment remains limited to a few centres**.** Refraction and low vision services have expanded slightly through the establishment of 12 vision centres. Refractive services and spectacles are subsidised by external donor funding. The RAAB results show an increase in the availability of spectacles particularly for near vision but coverage remains low and the availability of reactionists is still well below the recommended level of one reactionist per 100,000 population (13).

Compared to 2013, there is better availability of optical equipment in Bo, Kenema, and Freetown, though rural access is still negligible. Awareness and demand for spectacles have improved, but affordability remains a barrier, and unregulated private optical outlets have increased in Freetown, raising concerns about quality assurance.

Integration and Continuum of Care

Since 2013, there has been gradual progress in integrating eye care within the broader health system, particularly through inclusion in the National Eye Health Policy (2021–2030) and BPEHS updates. However, verticality persists: eye care is still largely seen as a stand-alone programme rather than a routine component of primary health care or hospital service packages. The referral system from PHUs to district eye units remains weak, mirroring 2013 patterns of low referral rates and poor feedback mechanisms.

Some positive change is evident through closer collaboration between eye health and maternal and child health services, such as co-location of Vitamin A and screening activities during outreach. In light of this, integration with NCD programmes, rehabilitation, and disability services remains limited.

Key Challenges and Bottlenecks

Persistent challenges identified in 2013 continue to define the service delivery landscape:

- Uneven distribution and inequitable access to care; services remain urban-centric.
- Dependence on donor-driven outreach and supplies; sustainability remains fragile.
- Low cataract surgical productivity; though improved, still far below need.
- Limited specialised and low vision services.
- Weak integration and referral linkages.

In summary, while Sierra Leone's eye health service delivery system has evolved since 2013 with improved infrastructure, expanded outreach, and stronger policy alignment, the system remains heavily donor-reliant and unevenly implemented. Sustained domestic financing, human resource reforms, and robust supervision mechanisms are critical to transforming these gains into a resilient, equitable, and self-sustaining service delivery model.

Eye health medical products and pharmaceuticals

Availability of Equipment and Supplies

Eye care facilities across Sierra Leone reported significant improvements in the availability of ophthalmic equipment compared to 2013, largely due to sustained investment from development partners. Most secondary-level hospitals now possess basic diagnostic equipment such as slit lamps, ophthalmoscopes, retinoscopes, sterilizers, B-scan machines, and puff air tonometer. In districts such as Bo, Makeni, and Kabala, the presence of these tools has allowed facilities to conduct routine eye screening, diagnosis, and surgical procedures.

In contrast, the 2013 EHSA found that only a few hospitals mainly had functioning ophthalmic devices, largely donated by development partners with many essential items such as retinal scopes and A-scans missing even in the large teaching hospital Connaught.

However, despite these gains in the availability of medical supplies made in the past decade, equipment availability remains uneven across districts and facilities. PHUs and smaller district hospitals frequently lack essential items, limiting their ability to provide comprehensive eye care. Facilities in remote districts like Moyamba and Pujehun reported operating with only a single functioning diagnostic device, while others relied on shared instruments borrowed from neighbouring districts. In many cases, broken equipment remains out of service for extended periods, reducing service continuity and diagnostic capacity.

Respondents emphasised that the distribution of equipment does not always align with patient volume or disease burden. Some facilities possess devices they cannot use effectively due to the absence of trained personnel, while others with high demand lack the basic instruments needed for daily operations. This mismatch highlights the need for a national equipment inventory and rational distribution strategy guided by service readiness assessments.

Unlike in 2013, when procurement decisions were largely ad hoc and partner-driven, there is now partial inclusion of eye equipment in national procurement plans under the Directorate of Drugs and Medical Supplies (DDMS). Yet, systematic forecasting and equitable allocation are still absent, echoing previous findings of misalignment between supply and need.

Maintenance, Servicing, and Technical Support

A recurring theme across all interviews was the chronic lack of technical expertise to maintain and repair ophthalmic equipment. Few biomedical engineers in Sierra Leone have specialised training in eye care technology, and those stationed in hospitals are often general technicians without specific skills in ophthalmic equipment maintenance. When machines such as slit lamps or visual field analysers malfunction, facilities typically depend on visiting technicians from Freetown or wait for donor partners to coordinate repairs, a process that can take several months.

Health workers noted that this situation leads to frequent equipment downtime and compromises service delivery. In some instances, biomedical engineers at district hospitals attempt repairs using a trial-and-error approach, which occasionally causes further damage. Respondents repeatedly called for the establishment of a dedicated national maintenance framework, including training for biomedical engineers in ophthalmic equipment servicing and the creation of a preventive maintenance schedule integrated into hospital operations.

Without reliable maintenance systems, much of the equipment donated through partner support risks rapid deterioration, eroding the long-term value of these investments. Respondents suggested that maintenance responsibilities be formalised within MoH and backed by a small recurrent budget for spare parts and servicing.

This challenge mirrors the 2013 findings, which highlighted the complete absence of a maintenance framework and dependence on donor-led repairs. While a few hospitals now host biomedical technicians, none are ophthalmic trained. The persistence of equipment downtime underscores that progress since 2013 has been in procurement rather than in systems for upkeep and sustainability.

Access to Medicines and Consumables

Across all regions, access to essential eye medicines remains erratic and heavily donor dependent. The majority of ophthalmic drugs and consumables, such as eye drops, ointments, surgical sutures, and diagnostic dyes, are supplied by donor organisations with only minimal supplementation from government procurement systems. At the national level, MoH respondents confirmed

that ophthalmic products are not consistently included in the central medical stores supply chain, leading to frequent stock-outs.

District-level respondents described situations where eye clinics exhaust supplies and must either purchase replacements from private pharmacies or ask patients to buy them externally. In Bo and Makeni, patients expressed confidence in the hospital pharmacies but acknowledged that medicines sometimes run out, forcing them to incur additional transport and purchase costs. Anti-glaucoma medications were cited as particularly scarce, with availability largely restricted to patients enrolled in the FHCI scheme.

Eye units commonly apply cost-recovery models to replenish stock, but these efforts are limited by the large proportion of patients receiving free or subsidised care. Where cost recovery is implemented, revenues are typically used to purchase small quantities of essential medicines to bridge gaps before the next partner consignment arrives. However, the absence of a formal national procurement plan for ophthalmic drugs undermines the availability and pricing across facilities.

In 2013, the NEHP lacked any structured procurement mechanism and relied almost entirely on donors for ophthalmic drugs. However, as of 2025, there has been some integration into the national essential medicines' framework, with a few key drugs such as tetracycline and chloramphenicol retained on the national Essential Medicines List (EML). However, specialised items including anti-glaucoma drugs and diagnostic agents remain inconsistently supplied, and frequent stock-outs persist as a major bottleneck.

The availability of essential eye care medicines in PHC facilities remains very limited despite the political commitment to strengthen the delivery of eye care services at the primary and community level and the recent training of PHC staff in PEC. For example, a study of the provision of eye care in PHC facilities conducted in 2021-2022 in four districts of Sierra Leone showed that among 32 PHC facilities surveyed (30), none had all supplies and consumables listed in the WHO PEC manual despite the deployment of staff trained in PEC. For example, none of the surveyed facilities had water and vessels for irrigation and only a few facilities had eye pads, eye shields, paper wipes or warm water for compresses. The availability of essential medicines for eye care was also extremely limited. Bonthe district had the most noticeable shortages. Out of ten medicines recommended for PHC facilities in the WHO PEC manual, the facilities surveyed in this district had only paracetamol tablets and even these were available in only four out of eight facilities surveyed.

Quality Assurance and Supply Chain Management

The supply chain for eye care commodities is fragmented and largely parallel to the government system. Partners remain the dominant supplier, distributing equipment, medicines, and consumables directly to supported districts. While this arrangement ensures timely access in some areas, it limits national oversight and integration into broader health logistics platforms such as mSupply. Respondents from MoH and DHMTs reported that data on ophthalmic commodity stock levels are not routinely captured or monitored within the national logistics management information system (LMIS).

Quality control mechanisms for ophthalmic drugs are generally embedded within broader pharmaceutical regulations, but eye care facilities lack dedicated protocols for storage and stock monitoring. Health workers in several districts highlighted challenges such as inadequate storage space, temperature fluctuations affecting drug stability, and the absence of standardised inventory management tools.

Strengthening integration between partner-led supply systems and MoH logistics structures would improve visibility and sustainability. Respondents recommended that the NEHP collaborate with the

Directorate of Pharmaceutical Services to include ophthalmic commodities within national quantification and forecasting exercises.

While the 2013 EHSA documented the early stages of a medicines management information system and lack of ophthalmic data, by 2025 this gap has narrowed only slightly. Eye care commodities are still excluded from electronic LMIS dashboards and are tracked manually. However, some pilot integration has begun under the new Integrated Health Commodity Supply Chain Reform marking an incremental but important step toward national oversight.

Assistive Technologies and Visual Aids

The availability of visual aids including spectacles and low-vision devices remains limited and inconsistent. While a few international organisations have supported the distribution of glasses, most facilities lack the equipment and personnel for on-site refraction, glazing, or fitting. In several districts, patients must travel long distances to obtain corrective lenses, and the associated costs often exceed their ability to pay.

Where available, spectacles typically cost between 50 and 70 New Leones, a price many patients find prohibitive. Under the FHCI, some patients can access visual aids at no charge, but this benefit is restricted to specific categories. Respondents across focus groups emphasised that limited access to affordable visual aids significantly reduces treatment outcomes, as patients who receive corrective prescriptions cannot always obtain the necessary glasses.

Despite these challenges, positive developments have occurred through partnership-driven outreach. In Bo and Makeni, outreach campaigns have distributed glasses and conducted free refraction tests, demonstrating how community-based interventions can expand access. Nonetheless, without systematic integration into national procurement and subsidy mechanisms, access to assistive technologies will remain sporadic and inequitable.

This reflects only partial progress since 2013, when Vision Aid Overseas and BEHL provided basic refraction units in Bo and Connaught. While outreach-based refraction has expanded, local production and sustainable supply of spectacles remain underdeveloped, with no local glazing workshops formally supported by the MoH.

Integration of Eye Commodities into the Health System

Efforts to integrate eye care commodities into the broader national health logistics system are at an early stage. Although the Directorate of Primary Health Care oversees the NEHP, coordination between programme teams and the pharmaceutical directorate is limited. Respondents noted that ophthalmic supplies are often treated as vertical programme commodities, managed separately from essential medicines for other diseases. This separation contributes to inefficiencies and hinders long-term sustainability.

MoH officials acknowledged the need to align eye care logistics with the Integrated Health Commodity Supply Chain Reform currently under review. This would involve developing standard operating procedures for eye care products, building district-level capacity for forecasting and ordering, and ensuring that ophthalmic drugs are reflected in the EML and quantification tools.

Integrating eye commodities into the national supply chain would also enhance data visibility through DHIS2-linked LMIS dashboards, allowing for better monitoring of stock levels and reducing reliance on partner-managed parallel systems.

The absence of integration mirrors findings from 2013, when ophthalmic procurement and distribution were handled entirely outside government systems through parallel donor channels. The current reform agenda therefore represents a critical opportunity to close a decade-long structural gap in supply chain integration for eye health.

Key Challenges and Bottlenecks

Despite notable improvements in the availability of ophthalmic equipment and medicines since 2013, persistent and systemic challenges continue to constrain the sustainability and equity of eye health service delivery in Sierra Leone:

- Uneven distribution of ophthalmic equipment and supplies.
- Absence of a national maintenance and repair system.
- Weak integration of ophthalmic commodities into the national supply chain.
- High dependence on donor financing.
- Frequent stock-outs and fragmented procurement.
- Limited technical capacity in pharmaceutical and logistics management.
- Poor quality assurance and regulation of ophthalmic products.
- Inadequate access to assistive technologies.
- Lack of data for planning and monitoring.

In summary, while Sierra Leone has moved from isolated, donor-dependent provision in 2013 to broader geographic availability and emerging integration by 2025, the system remains fragile. The main bottlenecks are structural and rooted in financing, supply chain governance, maintenance capacity, and data visibility. These all require concerted government leadership to transition from partner-led provision to a nationally sustained model.

Eye health information management system

Data Collection and Reporting Practices

Across all sites, respondents confirmed that data collection for eye care is conducted routinely within health facilities, primarily through paper-based registers and forms. These records capture basic information such as patient demographics, diagnosis, treatment type, and referrals. However, the level of detail and completeness of these data vary widely across facilities. Some districts maintain comprehensive patient registers, while others rely on minimal recording that only logs the number of patients seen or surgeries conducted. In 2013, data capture was largely inconsistent and often subsumed under generic morbidity indicators such as “eye infections,” with little disaggregation by diagnosis or age group. By 2025, more facilities now routinely record eye-specific data, reflecting gradual integration into national data systems, although reporting completeness remains uneven.

The DHIS2 serves as the national platform for consolidating health data, including indicators for eye care. Facility staff record data manually in patient registers, and the figures are then aggregated and submitted to district monitoring and evaluation (M&E) officers for entry into DHIS2. In several districts such as Bo, Makeni, and Pujehun, health workers reported familiarity with this process and noted that data submissions are made monthly. However, others highlighted persistent gaps in accuracy, timeliness, and follow-up. Unlike 2013, when eye health data were managed through isolated, paper-based reports submitted to DHMTs, the 2025 integration into DHIS2 marks a significant improvement in national visibility and coordination.

One of the recurring challenges cited was the inconsistent availability of standardised data collection tools. The eye care assessment (“*Health Form 13*”), which contains specific indicators for eye conditions, is often unavailable at facilities. When this occurs, staff revert to the standard health assessment, “*Health Form 1*”, which only has one line item for eye cases. This results in significant loss of detail, as multiple diagnoses, cataract, glaucoma, refractive error are all grouped into one category. Respondents stressed that the irregular restocking of data forms hampers routine monitoring and reduces the visibility of eye care within the broader health reporting system. This

challenge reflects continuity from 2013, when the absence of a standardised NEHP reporting format limited data comparability and completeness.

Data Quality and Use for Decision-Making

The overall quality of eye health data remains variable and weakly institutionalised. In some facilities, data are recorded accurately and cross-checked during monthly review meetings; in others, incomplete and inconsistent entries are common due to workload, limited training, and weak supervision. Data validation processes are not systematically applied, and discrepancies often arise between facility-level registers and figures reported in DHIS2. In 2013, validation was virtually absent, with data rarely reviewed beyond submission; in 2025, some progress has been made through district-level reviews, though national-level consistency is still lacking.

Respondents from district and national levels indicated that data utilisation for planning and decision-making is minimal. While DHIS2 provides a national repository, its use for guiding budget allocation, procurement, or workforce planning in eye care is limited. Eye health indicators are often overshadowed by higher-priority programmes such as maternal and child health, malaria, or immunisation. Several district officials observed that data from DHIS2 are “rarely discussed” during health review meetings unless donor partners initiate a data-sharing session. In 2013, data were seldom used beyond compliance reporting, and this pattern largely persists. However, 2025 interviews show isolated improvements in facilities where partners support local data reviews and dashboards.

At the facility level, some progress was reported in using data for internal management. In Bo and Makeni, eye care units conduct basic trend analysis to monitor patient attendance and identify peak service periods. Staff also use records to plan outreach campaigns and assess the uptake of specific services such as cataract surgeries or refraction. These examples, though isolated, demonstrate the potential for data-driven improvement if systematically supported and scaled across districts.

Feedback Loops and Data Flow

The flow of information from facilities to districts and then to the national level follows a linear but fragmented pattern. Data are transmitted upward through monthly facility reports, but feedback to the originating facilities is irregular. Health workers often expressed uncertainty about how their ‘eye’ facility data are used and what actions are taken ‘at the top-level’ based on their submissions. Some reported receiving occasional feedback from DHMTs during quarterly supervision visits, but most said there is no structured feedback mechanism from the Ministry or district offices. This represents limited change since 2013, when feedback from the NEHP was rarely provided, and facilities did not know how their data were used. Partner-led feedback has filled this gap but remains unsystematic.

In some cases, partners facilitate data review and feedback sessions through the Regional Eye Care Programmes, helping facilities analyse trends and identify service gaps. Health workers described these partner-led feedback loops as the most practical avenue for learning and performance review. However, reliance on external actors to sustain these processes highlights the limited institutional ownership of data governance within the public sector. This continues a pattern from 2013, where international NGOs led most data compilation and analysis for NEHP.

Capacity and Digitalisation

The capacity to manage and analyse data is constrained by limited digital literacy and lack of dedicated M&E personnel within eye care units. Only a few districts have an M&E officer explicitly supporting the eye health programme. Where these officers exist, they are often responsible for multiple health programmes and may not prioritise eye care reporting. Compared to 2013, when no eye care-specific data officers existed, 2025 has seen the gradual involvement of district M&E teams, though without dedicated posts for ophthalmic data.

Most facilities continue to rely heavily on manual record-keeping. Computers and internet connectivity are scarce, and where available, they are often shared across multiple departments. The result is slow data entry and delays in transmission to DHIS2. Health workers expressed interest in digitising patient records to improve efficiency and accuracy but noted that such initiatives would require investment in equipment, training, and connectivity. This indicates slow progress in digitalisation since 2013, though national DHIS2 integration has laid the foundation for future digital transition.

At the national level, MoH officials acknowledged these capacity gaps and indicated that plans are underway to integrate ophthalmic data modules into the next DHIS2 upgrade. This would standardise reporting templates and allow for real-time monitoring of key indicators such as cataract surgical rates, refractive error cases, and glaucoma prevalence. This planned DHIS2 upgrade represents a major policy advancement compared with 2013, when eye indicators were entirely absent from national electronic systems.

Monitoring, Evaluation, and Research

M&E of eye health activities at both district and national levels are largely driven by partners. The organisation supports quarterly reviews, data audits, and supervision visits, which have helped identify bottlenecks in service delivery. However, when partner support is delayed or unavailable, these M&E activities are rarely implemented. In 2013, M&E was also partner-led and episodic; by 2025, there was a better structure but weak sustainability once donor funding lapses.

At the national level, there is growing recognition of the need for evidence-based policy and programme evaluation. The recent inclusion of eye care indicators in national performance frameworks provides an entry point for strengthening M&E capacity within MoH. In addition, the increasing collaboration between Sightsavers and DPPI presents an opportunity to institutionalise regular data reviews and build local analytical capacity. This contrasts sharply with 2013, when there was little to no link between NEHP data and the DPPI, signalling improved alignment with national health information structures.

Research on eye health is gradually expanding. Several respondents mentioned ongoing studies on cataract outcomes, refractive error prevalence, and health system readiness, supported by Sightsavers and other academic partners. However, there remains no formal mechanism for translating research findings into policy or practice. This marks progress from 2013, when the research base for eye health was almost non-existent and data were rarely used for advocacy or planning.

Key Challenges and Bottlenecks

- Incomplete and inconsistent reporting due to reliance on paper-based tools and irregular supply of standardised forms.
- Weak data validation and feedback loops limit the reliability and use of information for decision-making.
- Limited digitalisation and poor internet access delay DHIS2 entry and analysis.
- Dependence on external partners for M&E support undermines sustainability.
- Low data literacy and shortage of dedicated M&E staff restrict analysis and evidence-based planning.
- Eye indicators in DHIS2 remain basic, lacking disaggregation for age, sex, or specific eye conditions.
- Insufficient translation of research into policy continues to hinder learning and adaptation.

In summary, while Sierra Leone has made progress in integrating eye health into DHIS2 and establishing early data use practices, the system remains constrained by weak institutional ownership, inadequate resourcing, and dependence on external partners. Strengthening national

data governance, digital capacity, and routine feedback will be critical to building a responsive and evidence-driven eye health information system.

Discussion

Sierra Leone's health system, like most countries in the Sub-Saharan African region is heavily dependent on external assistance (12). Managing the transition of health systems from vertical, donor-driven programming to integrated systems, ensuring alignment with national priorities is well supported at the policy level but remains challenging for most low-income countries with very constrained fiscal space (17).

Since the 2013 EHSA, Sierra Leone has made notable strides in expressing its commitment to eye care in formal policies and plans and developing its eye health services, aspiring to transition from a donor-led vertical programme to a nationally integrated and sustainable model (18). Key improvements include formal recognition of the NEHP within the MoH; increased public awareness of preventable blindness and the expansion of provision of cataract surgeries and refractive error services across several districts. These developments reflect strong political commitment and community engagement with eye health. However, the system remains heavily reliant on external partners, indicating that its long-term sustainability is still fragile (19).

The current landscape embodies a dual reality of progress and transition. On one hand, Sierra Leone has demonstrated successful attempts in expanding eye care services despite severe financial constraints (1). On the other hand, long-term sustainability depends on translating the current policy commitments to tangible actions, which result in increased population coverage. Lessons learned from other settings highlight several factors associated with sustained service coverage, including strong policy advocates, supportive economic and political climate, transparent and well-developed strategic planning, effective mechanisms for mobilising and pooling domestic funding, improved governance, and institutional strengthening (17). In Sierra Leone, leadership actions within MoH exemplified this, bringing renewed momentum, strengthened partnerships, and ensured continuity (1). These actions have collectively reinforced the foundation of the NEHP and expanded its strategic reach across regions. The next phase will therefore require consolidating these leadership gains by embedding them within stronger institutional mechanisms, ensuring that vision, accountability, and coordination remain consistent regardless of leadership changes (19).

The wider health system context presents both constraints and opportunities. Sierra Leone's overall current health expenditure was 4.7% of GDP. Sierra Leone's economy is growing but is still relatively small with current GDP estimated to be US$ 6.97 billion and GDP per capita of US$ 807 (31). The current health expenditure per capita is estimated to be US$ 36 (11), which is significantly lower than the minimum funding recommended of US$86 per year (32). As a result, the nation's health needs far exceed available financial resources. In addition, the proportion of per capita health expenditure funded by the government is estimated at only 17%, with 29% funded by external donors and 55% by out-of-pocket expenditure (11). This limited fiscal space means that specialist services, such as eye care, receive modest allocations compared to higher-mortality priorities like malaria and maternal health (1). As a result, the eye care delivery remains heavily dependent on NGOs, who have historically supported eye care. However, the number of such NGOs is limited and the resources available to them are not sufficient to address all population needs, particularly as the population is rapidly growing with improved life expectancy and a moderate increase in aging.

Furthermore, procurement bottlenecks and human resource shortages and uneven distribution result in further delivery gaps and inefficiencies. These systemic issues coupled with chronic underfunding hinder the effectiveness of new initiatives, such as training of PHC workers or innovations in commodity supply chains or HMIS. While the government is trying to deal with these challenges, the growing population needs often outpace their commendable efforts (21).

Our findings suggest that formal political commitments to eye health and the development of up-to-date national strategies and plans are very important, but they are not sufficient to achieve a significant improvement in access to eye care. If policy commitments are not backed up by the implementation plans and funding, they remain aspirational or only partially implemented. Our findings show that Sierra Leone made significant improvements to its eye care policy and governance system, attempted to integrate eye care medicines in the Essential Medicine List, integrated eye care indicators in the DHIS2 system and trained primary eye care workers. However, without adequate financial resources, many commitments remain aspirational. The number of hospitals with operating facilities and eye care personnel remains extremely limited; many facilities at both primary and secondary levels lack essential equipment and medicines, the equipment, where available cannot be adequately maintained; the collected data is not always accurate or timely and there are delays in transferring it between different administrative levels due to the lack of IT infrastructure and technical capacity. Trained staff is often demotivated due to poor deployment conditions and lack of equipment and medical supplies. As a result, while formal policy commitments to eye care are in place, the implementation is slow and outpaced by the growing needs. To be able to address these policy implementation gaps, the system requires a substantial level of investment, particularly in eye care infrastructure and human resources to achieve the ratios recommended by IAPB. The system also requires adequate and systematic resources to support procurement and maintenance of equipment, purchasing supplies and medicines and efficient management of data. In the short run, some resources will also need to be allocated for outreach services, as a large proportion of the population in Sierra Leone continues to live in poverty and cannot afford travelling to distant hospitals. This could, however, progressively improve if eye care infrastructure develops and becomes available in more remote parts of the country.

Conclusion

In conclusion, Sierra Leone's eye health system has evolved considerably over the past decade, marking a shift from fragmented, donor-driven interventions to an increasingly coordinated national effort. The NEHP has established a recognised policy and institutional foothold within the MoH, supported by a growing network of regional and district eye care units. Significant progress has been made in service delivery, human resource development, and community awareness, demonstrating that even in a resource-constrained context, strategic partnerships and local commitment can yield tangible results (23).

However, sustainability remains the system's central challenge (25). Financing, logistics, and workforce structures continue to rely heavily on development partners and out-of-pocket expenditure, and even when these resources are combined, they are well below the current population needs. Both government budget allocations and donor funding for eye health remain limited, while cost recovery cannot be fully implemented, as high user fees at the facility level are unaffordable for a large proportion of the population. Workforce shortages persist for all cadres, while primary health care workers can only address very basic eye care needs. In addition, the primary care system continues to rely on long-term volunteers without formal recognition resulting in issues with morale and retention. Data systems are improving through the integration of eye health indicators in DHIS2, yet routine data use for planning and decision-making remains inconsistent (26).

The future of eye health in Sierra Leone lies in the country's ability to move from dependence to stewardship. With committed leadership, sustained investment, and continued collaboration between government and partners, Sierra Leone has an opportunity to make faster progress towards the goals of Vision 2030 and universal and equitable eye health coverage.

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