Eye Care Situation Analysis of Nepal

Government of Nepal
Ministry of Health and Population
Ramshahpath, Kathmandu
Nepal

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Government of Nepal
Ministry of Health & Population
Phone : 4. 262987 262590 262802 262706 262935 262862
Ramshahpath, Kathmandu
Nepal

Ref: ....

Date : 2081/09/03

PREFACE

The Eye Care Situation Analysis Tool (ECSAT) Report 2024 represents a collaborative effort by the Ministry of Health and Population (MoHP) of Nepal, with support from the World Health Organization (WHO) Nepal Office, to evaluate and enhance eye care services across the country. This report assesses Nepal's progress in integrating eye health within the broader health system, identifying areas for improvement in achieving Integrated People-Centered Eye Care (IPEC).

ECSAT is one of four tools included in the WHO's "Eye Care in Health Systems: Guide for Action". This standardized tool supports countries in planning and monitoring eye health services within their health systems. Designed specifically for national and provincial Ministry of Health planners and policymakers, ECSAT works as an analytical tool to form actionable insights to strengthen leadership and governance, service delivery, workforce distribution, financing, and information systems. The initiation and execution of ECSAT assessment are led by the MoHP and eye care coordination bodies.

As the first country to implement the ECSAT at the national level, Nepal has set a global benchmark in eye health systems analysis. This report is the second ECSAT report on Nepal, with the first published in 2015. However, it is the first to use the updated ECSAT framework, revised by the WHO to incorporate new metrics t reflecting global advancements and addressing emerging challenges in eye care systems. As a result, this report lays a foundation for evidence-based interventions to enhance the accessibility, availability, affordability, acceptability, and equity of eye health care services within Nepal's federal system.

We extend our gratitude to Policy, Planning and Monitoring Division (PPMD) of MoHP, especially Dr. Krishna Prasad Paudel, Division Chief, all the members of the Technical Working Group, the WHO Collaborating Centre at Tilganga Eye Hospital, and Nepal Netra Jyoti Sangh for conducting the situational analysis using ECSAT.

Mr. Hari Prasad Mainali Secretary	Dr. Roshan Pokhrel Secretary

Government of Nepal
Ministry of Health & Population

Phone : 4. 262987 262590 262802 262706 262935 262862

Ramshahpath, Kathmandu
Nepal

Ref: ....

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FOREWORD

Delivering accessible and equitable eye care services remains a critical priority for the Ministry of Health and Population (MoHP). The Eye Care Situation Analysis report is a significant step toward achieving this vision by providing an in-depth assessment of Nepal's eye health system. This report highlights the achievements, challenges, and opportunities for strengthening eye care services at all levels of governance. It builds on the previous implementation of the Eye Care Situation Analysis Tool (ECSAT) in 2015, with this updated iteration focusing on a more comprehensive assessment of Nepal's eye care system. It integrates a revised framework to evaluate progress and identify actionable steps toward implementing Integrated People-Centered Eye Care (IPEC) in line with international eye health standards.

The findings of this assessment highlight Nepal's achievements in eye care, such as improved cataract surgical coverage and elimination of trachoma. However, significant challenges persist, including disparities in service delivery, workforce gaps, financial barriers, and the need for robust information systems in eye health.

We sincerely appreciate the leadership and guidance of the MoHP and the support of the World Health Organization (WHO) Nepal Office. We extend our gratitude to the Technical Working Group, including the WHO Collaborating Centre at Tilganga Eye Hospital and Nepal Netra Jyoti Sangh, for their hard work and dedication in conducting the ECSAT analysis. This report not only reflects the achievements of the eye health sector but also serves as a valuable guide for the MoHP in our continued commitments to achieving Integrated People-Centered Eye Care.

Dr. Tanka Prasad Barakoti Additional Health Secretary	Dr. Sangeeta Kaushal Mishra Additional Health Secretary	Dr. Dipendra Raman Singh Additional Health Secretary

Government of Nepal

Ministry of Health & Population

Phone : 4. 262987, 262590, 262802, 262706, 262935, 262862

Ramshahpath, Kathmandu
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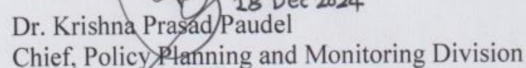
ACKNOWLEDGEMENT

I am pleased to present the Eye Care Situation Analysis Report 2024, which provides a comprehensive overview of the current state of Nepal's eye health system. This report offers an extensive assessment of the eye health landscape and achievements, and areas for improvement in service delivery, guided by the framework of the World Health Organization's (WHO) Eye Care Situation Analysis Tool (ECSAT). It is the result of collective efforts by the Ministry of Health and Population (MoHP), in collaboration with eye health institutions, associated eye care stakeholders and serves as a key milestone in our path towards Universal Health Coverage. As the Chief of the Policy, Planning and Monitoring Division, I am honoured to have led and worked alongside my dedicated team to produce this report.

This analysis highlights the current status of leadership and governance, service delivery (access and quality), workforce, financing, and information systems within Nepal's eye care sector. This report reflects our ongoing commitment to addressing eye health challenges and ensuring equitable access to care for the Nepalese population.

I extend my sincere appreciation to the Policy, Planning, and Monitoring Division of the MoHP (Dr Pusparaj Paudel, Ravi Kanta Mishra, Samiksha Baral), and members of the Technical Working Group (Dr. Reeta Gurung and Dr. Shailesh Mishra), as well as the WHO Collaborating Centre at Tilganga Eye Hospital, and Nepal Netra Jyoti Sangh for their contribution throughout this process. Lastly, we extend our gratitude to the consultant Dr. Mohan Krishna Shrestha for his efforts in data collection, analysis, and preparation of this report. It is my firm belief that the findings and recommendations presented here will guide future policies and planning efforts to strengthen Nepal's eye care services and improve accessibility to eye health nationwide. New information can be leveraged to prioritize actions, allocate resources effectively, and implement targeted interventions aimed at improving the lives of the Nepalese people.



18 Dec 2024

Dr. Krishna Prasad Paudel
Chief, Policy Planning and Monitoring Division

Acronyms

CEC	Community Eye Center
CPD	Continuous Professional Development
ECSAT	Eye Care Situation Analysis Tool
eCSC	Effective Cataract Surgical Coverage
eREC	Effective Refractive Error Coverage
GEDSI	Gender Equity, Disability, and Social Inclusion
HIS	Health Information System
HREH	Human Resources for Eye Health
IHMIS	Integrated Health Management Information System
IOL	Intraocular Lens
IPEC	Integrated People-Centered Eye Care
MOHP	Ministry of Health and Population
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organization
PHC	Primary Health Care
RAAB	Rapid Assessment of Avoidable Blindness
SDG	Sustainable Development Goals
TADDS	Tool for the Assessment of Diabetes and Diabetic Retinopathy
TWG	Technical Working Group
UHC	Universal Health Coverage
VAT	Value Added Tax
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction: The Eye Care Situation Analysis Tool (ECSAT) is one of four tools in the Eye Care in Health Systems: Guide for Action that WHO launched in May 2022 to assist countries in planning eye health services. ECSAT is a standardized tool designed to support countries in planning, monitoring trends, and evaluating progress towards implementing Integrated People-Centered Eye Care (IPEC). It was recently updated, comprising 31 components, and assesses the systems approach for eye care across six health system building blocks: leadership and governance, service delivery- access, service delivery- quality, human resources and infrastructure, financing, and information systems. Each of the 31 ECSAT components includes a questionnaire, a maturity scoring system, and a set of possible actions. The maturity scoring system helps identify components of eye care that may be prioritized in the planning process.

As a member country, Nepal is taking the lead in implementing ECSAT under the guidance of the Ministry of Health and Population. It is the first country to implement ECSAT at the national level and is actively providing constructive input in software development as well. The objective of ECSAT is to undertake a comprehensive situational analysis of the health system framework for eye care.

Methods: A cross-sectional survey was designed to implement an ECSAT survey under the leadership of the Ministry of Health and Population. The Steering Committee on Eye Health and the core technical team, endorsed by MOHP, along with the national coordinator, guided the process. The ECSAT technical working group, consisting of members from MOHP, WHO, WHO CC Tilganga Institute of Ophthalmology, and Nepal Netra Jyoti Sangh (endorsed by the steering committee), played a pivotal role in guiding the ECSAT process.
Data and information were collected from various stakeholders and sourced from accessible outlets, and interviews were conducted, as necessary. Key informant interviews and desk reviews were carried out based on whether the required information could be obtained from accessible sources or if interviews were deemed necessary. Certain questions necessitated related documentation to validate responses. A series of virtual and physical meetings were held at the federal level to assess the eye care status in Nepal.

The collected information was entered into the software, and the technical working group, along with the consultant, determined the maturity level and actions for each indicator. A data validation workshop may be the most effective way to achieve this. The draft report underwent discussions and consensus within the TWG and was presented to the High-Level Steering Committee before finalization.

The findings of the ECSAT assessment tool serve as a crucial document, providing a basis for evidence-based interventions at both policy and programmatic levels. These interventions aim to make eye health care services more affordable, accessible, and equitable within the federal system of Nepal.

Results: The following are the results of the survey which was as follows:

Leadership and governance: Strong leadership is evident, though political commitment could be stronger. Integration across health policies and programs is largely successful, with room for improvement.

Eye care service delivery – access: Limited access to eye care disproportionately affects disadvantaged communities. This focuses on the disparity in access between different populations.

Eye care service delivery – quality: The community lacks access to well-researched and effective eye care interventions. This has led to a perception of low quality and limited effectiveness.

Eye care workforce and infrastructure: The team is adequately staffed, with some flexibility to accommodate occasional shortfalls or surges in workload. The necessary infrastructure and equipment are largely available to ensure effective service provision. Spectacles need to be recognised as medical devices.

Eye care financing: Eye care costs create a financial burden for many. While some health insurance plans cover vision care, these plans often don't fully address the needs of low-income patients or those requiring ongoing treatment. This highlights the need for a more comprehensive approach to integrating eye care financing into the broader healthcare system.

Eye care information: A critical need exists for improved data collection on eye care. Limited reporting from the national HIS hinders our ability to assess service utilization, outcomes, and quality.

Conclusions: Leadership and Service Delivery: The report acknowledges strong leadership in the eye care program but suggests there's room for improvement in political commitment and integration across different health initiatives. While access to services is generally good, it disproportionately affects disadvantaged communities. There's also a concern that the quality of care is perceived as low due to a lack of well-established interventions. Workforce, Infrastructure, and Financing: The eye care team is adequately staffed and equipped to handle current needs. However, financial barriers remain a major challenge, especially for low-income patients and those requiring ongoing treatment. The current health insurance plans don't fully cover eye care costs, including the cost of spectacles, highlighting the need for a more comprehensive financing strategy to improve accessibility and affordability of essential eye care resources. Information and Data Collection: There's a critical need for better data collection within the eye care program. The current limitations in reporting hinder the ability to assess service usage, treatment outcomes, and overall program effectiveness.

CHAPTER I: INTRODUCTION

BACKGROUND

Vision impairment and blindness pose growing public health challenges globally, including in Nepal. The worldwide number of individuals affected by vision impairments, including blindness, is 2.2 billion and continues to rise. Factors contributing to this increase include an aging global population and lifestyle changes. In low- and middle-income countries, such as Nepal, these changes are commonly happening in conjunction with limited access to affordable eye health services, but often also low utilization of available services.
Vision, the most crucial sense for human beings, holds profound and far-reaching implications for a person's quality of life, including their ability to learn and work and connect socially. Vision loss leads to reduced productivity of the person impacted but also impacts national economies negatively.
Out of the 2.2 billion people globally that experience vision impairment or blindness, at least 1 billion cases could have been prevented or remain undiagnosed. Among these cases, 90% of individuals reside in low- and middle-income countries (LMICs). Remarkably, nearly 30% of the world's blind and vision-impaired population resides in the WHO South-East Asia Region, while the region is home to only 24% of the world's overall population.

The World Report on Vision, launched in 2019, highlights the role of eye care in contributing to the Sustainable Development Goals (SDGs). The lack of integration of eye care within wider health systems is identified as a key barrier. Too often, eye care lacks integration in wider health planning and budgeting, training of human resources and service delivery, especially at the primary level of care. In response, the report recommends making eye care an integral part of Universal Health Coverage (UHC) and implementing integrated people-centered eye care (IPEC) in health systems. This approach can further address the inequities in access to and provision of eye care services across the population. This approach aims to address inequities in access to and provision of eye care services across the population.

The Seventy-third World Health Assembly in 2020 adopted the resolution on integrated people-centered eye care, and the Seventy-fourth World Health Assembly in 2021 endorsed global targets for effective cataract surgical coverage (eCSC) and effective refractive error coverage (eREC) to be achieved by 2030. Recently, the WHO prioritized service delivery dividing it into two separate blocks (access and quality) and including more indicators. Moreover, the 74th WHO Southeast Asia Regional Committee mandated the development of a regional action plan for IPEC, considering the 2030 global targets. The Action Plan for IPEC in Southeast Asia 2022–2030 was endorsed during the 75th session of the Regional Committee in 2022 and subsequently published.

NEPAL'S CONTEXT

Vision impairment, including blindness, poses a significant public health challenge in Nepal. Over the last three decades, there has been notable progress in the field of eye health in the country. Cataract and uncorrected refractive errors stand out as the primary causes of visual impairment and blindness in Nepal. Even though the nation has actively developed and expanded its eye health services, e.g. by fostering public-private partnerships and promoting multi-sectoral coordination, many challenges remain.

Policy measures:

The Constitution of Nepal 2015, in Article 35, articulates the provision of basic health care as a fundamental right provided free of charge. The 2019 Health Policy emphasizes that primary eye care services will be fully integrated into the wide health care delivery system. Recently, the Ministry of Health and Population endorsed the National Eye Health Strategy 2079–2086 to tackle eye health issues in Nepal.

Eye care services:

Non-government organizations primarily deliver eye care services in Nepal, structured across four levels: primary, secondary, tertiary, and a Center of Excellence. These levels encompass a range of services, from basic to specialized, including subspecialty eye care services, training, and research.

Workforce:

There has been a significant increase in the number of human resources for eye care in Nepal, including ophthalmologists, optometrists, and allied ophthalmic personnel. Annually, there are about 50 ophthalmologists, 70 optometrists, and 320 ophthalmic assistants spread across approximately 8 hospitals and academic institutes. Around 2022, it was projected that there were around 408 ophthalmologists, 800 optometrists, and 1250 ophthalmic assistants. However, there is an inequitable distribution of the existing human resources for eye health. More than one-third of the total number of ophthalmologists work in Bagmati province, while Karnali province has only about three ophthalmologists.

Targets achieved:

Nepal achieved significant success in the elimination of trachoma in 2018, acknowledged by WHO as a notable public health accomplishment. Furthermore, the country has made substantial progress in reducing cataract-induced blindness through cataract surgery with intraocular lens (IOL) implantation.

Three national eye health surveys were conducted in 1981, 2010, and 2020, respectively. The prevalence of blindness was 0.84% in 1981, decreasing by two-thirds to 0.28% in 2022. In Nepal, untreated cataract (65.3%) is the leading cause of bilateral blindness, followed by uncorrected refractive errors, posterior segment disorders, glaucoma, etc. Over the years, both cataract surgical coverage and the visual outcome of cataract surgery have significantly improved. In 2022, there is a 15%-point increase in effective cataract surgical coverage compared to 2010.

Surveillance system:

Nepal has timely data on the prevalence of blindness and vision impairment from the Rapid Assessment of Avoidable Blindness (RAAB) survey conducted in 2010 and 2020. The overall prevalence of vision impairment and blindness across all age groups is 22% in Nepal. In adults, the common causes of vision impairment include uncorrected refractive errors, cataracts, glaucoma, age-related macular degeneration, diabetic retinopathy, corneal scarring, and trachoma.

Eye Care Situation Analysis Tool (ECSAT)

Although a population-based prevalence survey is useful to measure change over time and to identify disease specific priorities, it does not give an overview of the wider state of the eye care programme in Nepal. To provide a snapshot of the wider system, WHO recently developed the Eye Care Situation Analysis Tool (ECSAT). ECSAT was developed to support countries in the assessment of eye care and aims to identify priorities for the planning of eye health services. This standardized tool supports countries in planning, monitoring trends, and evaluating progress towards implementing IPEC. The tool was recently updated and comprises 31 components that assess the system's approach to eye care across six health system building blocks:

1. Leadership and Governance
2. Service Delivery - Access
3. Service Delivery - Quality
4. Human Resources and Infrastructure
5. Financing
6. Information System

Each of the 31 ECSAT components comprises a questionnaire, a maturity scoring system, and a set of actions. The maturity scoring system helps identify components of eye care that may be prioritized in the planning process. ECSAT initiation and execution are the responsibility of the Ministry of Health and Population. Key stakeholders include the Ministry of Health and Population, sectors involved in vision screening or eye care service delivery, WHO, external development partners, NGOs, and the private sector.

In 2015, Nepal implemented an earlier form of ECSAT. After a major revision of the ECSAT content by WHO in 2021, Nepal conducted a new survey in 2023, and the present report is referring to the related findings.
ECSAT methodology requires government leadership and endorsement of the survey. A high-level steering committee under the auspices of the Secretary, MOHP, oversees the activity. Furthermore, the Steering Committee endorses an established core Technical Working Group (TWG) to conduct the ECSAT.

Objectives

The objectives of the ECSAT are:

- Undertake a comprehensive situational analysis of the health system framework for eye care.
- Provide a 'snapshot' of the eye care sector, offering information on the current status of integrated people-centered eye care services, prioritization of services, and interventions.
- Address gaps within the eye sector and provide information for tracking the capacity and performance of the eye care sector in Nepal.

This survey holds particular importance as it will provide a national-level overview of eye care services within the federal context of Nepal

CHAPTER II: METHODOLOGY

1. Study design:

A cross-sectional survey was designed to implement an ECSAT survey.

2. Formation of technical working group:

The ECSAT was conducted under the leadership of the Ministry of Health and Population. The Steering Committee on Eye Health and the core technical team, endorsed by MOHP with the national coordinator, guided the process of ECSAT.

ECSAT technical working group members (endorsed by the Steering Committee) included MOHP, WHO, WHO CC Tilganga Institute of Ophthalmology, and Nepal Netra Jyoti Sangh.

3. Data collection techniques and tools:

A consultant was hired to gather the information outlined in the questionnaire across the 31 components listed in the assessment tool.

In coordination with the Technical Working Group (TWG), the consultant decided on the stakeholders, collected information from accessible sources, and conducted interviews as necessary. Key informant interviews and desk reviews were conducted based on whether the required information can be sought from accessible sources or whether interviews are required. Certain questions required related documentation for response validation. A series of virtual and physical meetings were held at the federal level to assess the eye care status in Nepal.

4. Data management, analysis and interpretation

The consultant and TWG supported to finalize a new software developed by the WHO for ECSAT and utilized it for data management. The consultant thereafter sought consensus on the 'maturity level' and subsequent recommended actions for each item based on the available information. The TWG ensured that the validated data was gathered, considering a data validation workshop as the optimal approach. The draft report was finally shared with the TWG for discussions and consensus and tabled at the High-Level Steering Committee before finalization.

5. Output/Recommended next steps forward

- The report of the findings of the eye care situation in Nepal using the revised version of the ECSAT tool
- High-level launch of the ECSAT report with all concerned stakeholders
- Dissemination at the provincial level

The findings of the ECSAT assessment tool are crucial documents and will be utilized for evidence-based interventions at both policy and programmatic levels, aiming to make eye healthcare services affordable, accessible, and equitable in the federal system of Nepal.

CHAPTER III: FINDINGS

BLOCK 1: LEADERSHIP AND GOVERNANCE

1. LEADERSHIP, COORDINATION, AND COALITION-BUILDING FOR EYE CARE

WHO Definition: Leadership refers to the process of influence through which leaders gain support from others to achieve goals associated with improving and strengthening eye care. Coordination relates to the organization of the different efforts to ensure they work together effectively. Coalition-building refers to uniting and aligning stakeholders to form groups, partnerships, networks and alliances that support eye care.

Nepal prioritizes eye health at the policy level, collaborating with international and national NGOs. This focus intensified after the 2015 constitution enshrined basic healthcare, including eye care, as a fundamental right. While a strong leadership and governance structure exists federally, provincial, and local levels require strengthening. Achieving universal health coverage and meeting Sustainable Development Goals by 2030 demands a minimum eye care package in all Local level (Palikas).

Nepal's eye care system demonstrates a foundation for advancement. The Ministry of Health provides moderate leadership, guiding the sector and garnering some political support. Financial sustainability is also moderate, with eye care integrated into broader health financing mechanisms and funding remaining stable or increasing. Additionally, intersectoral collaboration is moderate. Existing coordination mechanisms, platforms, and coalition’s function, with room for expansion, and most roles and responsibilities are well-defined. These elements establish a solid base for further strengthening the country's eye care system.

The current eye health system in Nepal has gaps that need addressing. To bridge this divide, policymakers at all levels need to come together. Discussions should focus on identifying unmet needs, ensuring eye care services are financially sustainable, and setting long-term goals with clear ways to measure progress. Additionally, the federal health ministry and insurance board should work together to include comprehensive eye care in health financing plans.

Another important aspect is building a strong network of eye health professionals. To achieve this, Nepal needs to establish clear roles and responsibilities for different eye health agencies, including consumer representatives. Training programs are crucial, especially in areas like Karnali province where there's a shortage of professionals. These programs should be high-quality and competency-based, ensuring a sufficient workforce that meets the needs of the population across the country.

2. EYE CARE INTEGRATION INTO LEGISLATION, POLICIES AND PLANS

WHO Definition: Eye care legislation refers to the laws and policies developed within a country's constitutional frameworks and legal regimes that encompass eye care. It also includes plans and strategies that relate to eye care. These are commonly agency wide or sector wide, action orientated and aim to achieve specified goals and objectives.

Eye care has become a top focus within Nepal's healthcare system. This increased emphasis stems from several key documents: the 2015 constitution, the Public Health Act and its regulations outlining minimum healthcare packages, and the National Health Policy of 2019. In 2022, the Ministry of Health and Population (MoHP) further solidified this commitment by creating a national strategic plan for eye health. However, there's still room for improvement in fully integrating eye health into broader healthcare policies.

Regarding policy, eye health has been incorporated into all policies. Non-government organizations are the major stakeholders to provide eye health care from basic to super-specialty services. Now-a-days, the Federal government is deploying mainly fresh ophthalmologists in central, provincial level hospitals and few district hospitals which increases the number of OPD services but limited major surgical interventions are implemented. Likewise, Nepal has been implementing a gender equity and social inclusion strategy and plans to incorporate disability soon. It has additionally initiated the development of an implementation plan, including costs, which provides a roadmap for the integration of eye health in the future.

To ensure comprehensive and accessible eye care across Nepal's healthcare system, a multi-pronged approach is needed. This includes developing national standards for eye care services, from basic checkups to specialized interventions. These standards would establish benchmarks for equipment, staffing, and care protocols. Alongside this, a comprehensive masterplan for eye care expansion is crucial. This plan, incorporating the principles of Gender Equity, Disability inclusion, and Social Inclusion (GEDSI), would outline strategies for increasing ophthalmologist deployment across all regions, particularly in underserved districts. Critically, the plan must be accompanied by a costed implementation plan. This detailed financial roadmap would identify resource requirements and funding mechanisms, ensuring the sustainable expansion of quality eye care services throughout Nepal.

3. INTEGRATION OF EYE CARE ACROSS RELEVANT SECTORS AND PROGRAMMES

WHO Definition: Eye care services require integration with relevant sectors and programmes (health and non-health) to provide services that are effective, equitable and of high quality.

The integration of eye health services is indeed a critical issue in our health system. Several challenges contribute to this poor integration across relevant sectors and programs. There is fragmentation of services, a lack of coordination among different entities, and restrictions in terms of both infrastructure and resources, as well as financial constraints. Inadequate information-sharing systems and communication channels between different healthcare providers and sectors also contribute to the condition.

All stakeholders, including non-health, should engage in the planning and coordination of services at all levels. Special frameworks for relevant sectors and programs, including non-communicable diseases programmes or the education sector, should be used to ensure eye care indicators measure the outputs and outcomes of the interventions.

Intersectoral coordination is an essential component of the eye health system in Nepal. It will benefit all members of the community to make a realistic plan and strengthen the overall systems in Nepal.

To strengthen the integration of eye care into Nepal's healthcare system, several key actions are needed. First, identifying priority sectors and programs for collaboration is crucial. This could involve areas like diabetes management, primary healthcare, and elder care. Second, actively engaging stakeholders from these sectors and programs in eye care planning is essential. This fosters collaboration and ensures a holistic approach. Third, guaranteeing eye care sector representation at strategy meetings and discussions across relevant sectors, including non-communicable diseases (NCDs), promotes better communication and understanding of eye health needs. Finally, incorporating eye care indicators within the frameworks of relevant sectors and NCDs allows for better monitoring and evaluation of progress towards integrated eye care delivery. These combined efforts will create a more coordinated and effective approach to eye health in Nepal.

4. REORIENTATION OF EYE CARE SERVICES TOWARDS PRIMARY EYE CARE WITHIN PRIMARY HEALTH CARE

WHO Definition: Reorienting the model of care involves ensuring that health care services prioritize primary and community eye care services. Prioritization includes adequate funding, workforce training and coordination with other services to ensure effective referral systems. Primary health care services are delivered in settings such as general practices, community health centres, allied health practices and via communication technologies such as telehealth and video consultations.

While primary healthcare settings in Nepal may sometimes offer basic eye care services, a consistent approach is lacking. Frameworks to guide the scope and type of services delivered at this primary level are not widely implemented. This creates a situation where the availability and quality of eye care can vary significantly depending on location and resources. Establishing clear frameworks would ensure a more standardized and accessible level of primary eye care across Nepal.

To ensure the sustainability and effectiveness of primary eye care in Nepal, a multi-pronged approach is required. Firstly, strong advocacy for adequate funding is essential. Conducting health economics assessments and highlighting the cost-effectiveness of primary eye care would provide compelling evidence for increased investment. Secondly, strengthening the primary level workforce is crucial. This involves training existing healthcare workers in basic eye care and gradually integrating ophthalmic personnel into Primary Health Care (PHC) facilities. Developing strategies for workforce sustainability, such as competitive salaries and career development opportunities, will be key to retaining qualified personnel. Finally, fostering coordination with other services and sectors is vital. This includes establishing effective referral systems that seamlessly connect patients needing specialized care with appropriate ophthalmic providers. By strengthening these crucial areas, Nepal can create a robust and accessible primary eye care system that benefits the entire population.

BLOCK 2: SERVICE DELIVERY – ACCESS

5. EQUITY OF EYE CARE SERVICES COVERAGE ACROSS DISADVANTAGED POPULATION GROUPS

WHO Definition: Equity is the absence of avoidable, unfair or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically or by other means of stratification. Equity is considered in terms of the eye care services coverage of marginalized or vulnerable groups that exist in the population, e.g. women, poor communities, indigenous people, ethnic minorities, people with disabilities, people in aged care, prisons, refugee camps.

A significant challenge to eye care in Nepal is the uneven distribution of services. Despite progress, many disadvantaged groups face low levels of equitable access. This means that some segments of the population, often due to factors like poverty, geographical remoteness, or social status, are missing out on crucial eye care. The gap in access between these disadvantaged groups and the rest of the population is reasonably large, highlighting the need for targeted interventions. Furthermore, the extent and causes of these inequities are not well understood because assessments are infrequent. Addressing these disparities requires a data-driven approach that identifies the most vulnerable populations and tailors solutions to their specific needs.

To achieve true equity in eye care across Nepal, several key steps are needed. Firstly, it's crucial to identify groups experiencing limited access or lower quality care. This might include women, people with disabilities, those living in remote areas, or lower socioeconomic groups. Once these disparities are understood, the next step is to develop legislation and regulations that promote joint accountability for equity. This means holding various stakeholders responsible, including government agencies, healthcare providers from different sectors, and even non-governmental organizations. Furthermore, actively engaging local people and stakeholders is essential. By utilizing mechanisms that encourage their participation in identifying problems and developing solutions, a sense of ownership and a more relevant approach to equity can be fostered. Finally, ensuring regular joint reviews of progress ensures all parties remain accountable and committed to achieving shared goals over time. This collaborative approach, with clear targets and ongoing monitoring, will be key to closing the gap in eye care access for all Nepalis.

6. PRIMARY LEVEL EYE CARE SERVICES INTEGRATED INTO PRIMARY HEALTH CARE

WHO Definition: Primary care is that level of a health system that provides entry into the system for all new needs and problems, provides person-focused (not disease-oriented) care over time, provides care for all but very uncommon or unusual conditions, and coordinates or integrates care provided elsewhere or by others. It is a whole-of-society approach that includes health promotion, disease prevention, treatment, rehabilitation and palliative care. Most eye conditions can be addressed at the primary level and eye care services need to be fully integrated.

Nepal faces significant challenges in making eye care accessible, particularly for disadvantaged populations. Currently, patients, including those most in need, largely lack access to eye care outside specialized ophthalmic facilities like clinics and hospitals. This limited access is compounded by the very low to non-existent integration

of eye care into primary healthcare. This means basic eye care services are rarely delivered at this crucial first point of contact for many patients. Furthermore, the distribution of eye care services within primary healthcare is extremely limited. Most geographical areas lack any eye care services at all, with only major urban centers offering a minimal level of provision. Findings show that approximately 9% of rural municipalities have access to primary eye care services, whereas it was about 60% in municipalities. This uneven distribution creates significant barriers for those living in rural or remote areas, further exacerbating inequities in access to essential eye care.

To address the significant gaps in eye care access across Nepal, a multi-pronged approach is needed. First, a crucial step is to expand eye care services into primary healthcare facilities. This would significantly increase accessibility for the general population. Second, ensuring increased coverage across local levels (Palika) is essential to bridge the gap in rural and remote areas. Third, developing outreach and mobile clinic programs specifically focused on primary eye care can reach underserved communities directly.

Furthermore, financial barriers must be addressed. By assessing who lacks access due to cost and developing strategies like incorporating comprehensive eye care into existing health insurance plans, financial accessibility can be improved. Additionally, advocating for a review of transportation issues and finding solutions for geographically convenient service delivery are crucial. This might involve strategically locating clinics or providing transportation support for patients in need.

Finally, focusing on timely access is key. Reviewing facility operational hours, implementing efficient appointment systems, and reducing waiting times can significantly improve the patient experience and overall efficiency of the system. Integrating or expanding electronic health (e-health) or mobile health (m-health) services can also be explored to facilitate easier access to eye care consultations and information. This comprehensive approach has the potential to significantly improve eye care access and equity across Nepal.

7. COMMUNITY-DELIVERED EYE CARE SERVICES

WHO Definition: Community health services provide support across a range of needs and age groups but are most often used by children and older people. Community services often support people with multiple, complex health needs. Community-delivered eye care refers to programmes or services that are integrated into other community-delivered health programmes. The defining feature is that they are delivered in community settings and usually are a form of secondary care. Delivery settings commonly include local health facilities, homes, schools and child care settings.

While Nepal has established some community-based eye care programs, significant improvements are needed to ensure equitable access. The current distribution offers moderate coverage, meaning some areas or populations still miss out on these crucial services. Additionally, the mix of programs addressing eye care needs varies across communities. While some programs offer awareness creation and basic screenings, and may even be integrated with broader health initiatives, there are clear gaps in service provision. To achieve true impact, Nepal needs to expand the reach of community eye care programs, ensuring a more comprehensive and targeted approach that meets the specific needs of all populations.

To strengthen eye care access and equity in Nepal, a multi-layered strategy is needed. Firstly, developing community-delivered eye care programs can bring basic services closer to the people. This could involve training

local health workers or volunteers to provide screenings and basic interventions. Secondly, integrating eye care into existing health programs delivered at the community level would optimize outreach and resources. Furthermore, ensuring increased coverage across Palika (local administrative units) is crucial to bridge the gap in rural areas. Building long-term sustainability requires integrating eye care into the health training curricula for relevant healthcare professionals. This equips them with the necessary skills to provide basic eye care within their existing roles.

Alongside service delivery, raising public awareness is vital. Community awareness-raising actions such as television, radio, and internet campaigns, along with printed materials like billboards and brochures, can be used to emphasize the importance of eye care. These campaigns should highlight the availability of effective interventions across all age groups, as well as vision rehabilitation services. Finally, the government can continue to contract non-governmental organizations (NGOs) to deliver flexible community-based eye care programs. This leverages the expertise of NGOs while ensuring broader geographic coverage. By implementing these combined strategies, Nepal can create a more accessible and equitable eye care system for all its citizens.

8. INTEGRATED PAEDIATRIC EYE CARE SERVICES

WHO Definition: This refers to the accessibility of paediatric eye care, including screening at maternity facilities and schools. Target populations include newborn infants, low-birth weight infants at risk of retinopathy of prematurity, and school-aged children.

Pediatric eye care in Nepal faces significant limitations. Currently, these specialized services are only available in a handful of locations, primarily large hospitals within major cities. This significantly restricts access for a large portion of the population, particularly those living in rural areas or facing financial constraints.

To ensure early detection and treatment of eye conditions in children, a comprehensive approach is needed. Firstly, strengthening or developing effective, cross-sectoral screening and referral systems is crucial. This would involve collaboration between health professionals, schools, and potentially community workers to identify children who may need further evaluation. Secondly, ensuring up-to-date, evidence-based guidelines (national or international) are in place for screening, referral, and management of paediatric eye care is essential. This standardization will ensure consistent and high-quality care across the system. Thirdly, monitoring adherence to these guidelines among healthcare providers is necessary to maintain quality.

Furthermore, integrating eye health into existing programs is key. Strengthening the integration of eye health into maternity and child health programmes allows for early detection of potential issues, including screening newborn infants. Additionally, developing systems for screening and managing retinopathy of prematurity (ROP), a potentially blinding condition in premature babies, is crucial.

Beyond healthcare settings, reaching out to the education sector and parents is vital. Advocacy campaigns promoting eye care during school ages, including periodic vision screening, can raise awareness and encourage early intervention. Finally, addressing HR management for paediatric eye care is essential. This may involve training existing healthcare professionals or exploring strategies to attract and retain qualified paediatric ophthalmologists. By implementing these comprehensive strategies, Nepal can significantly improve the eye health outcomes for its children.

9. INTEGRATED CATARACT SURGICAL SERVICES

WHO Definition: This refers to the accessibility, quality and affordability of cataract surgical services to all people in need, regardless of the level of vision loss due to cataract.

Despite the existence of eye care services in Nepal, significant gaps remain in accessibility. While services might be technically available in various locations, they often don't reach certain segments of the population. This can be due to several factors, including geographical remoteness, lack of awareness, or cultural barriers. Additionally, the cost of services remains a major obstacle for many, further hindering access to essential eye care.

To ensure all Nepalis have access to high-quality cataract surgery, a comprehensive approach is needed. First, a thorough review of cataract surgical services is crucial. This should assess performance, outcomes, and, importantly, patient perception of services. Based on this review, strategies can be developed to increase surgical volume based on population needs per surgical center. Additionally, efforts to improve the quality of service should be implemented.

Furthermore, engaging with private non-profit organizations can significantly expand outreach and service availability. Additionally, strong advocacy to the government highlighting the cost-effectiveness of cataract surgery is essential. This can help secure funding to improve access for low-income citizens. Finally, a review of national insurance scheme reimbursement strategies for cataract surgery is necessary. The goal is to find ways to minimize expenditure while still maintaining high-quality services. By implementing these combined strategies, Nepal can create a more accessible and sustainable cataract surgery system for its entire population.

10. INTEGRATED DIABETIC EYE CARE SERVICES

WHO Definition: Prevention of vision impairment from diabetic retinopathy is achieved principally through control of diabetes, early detection of retinal changes and timely treatment. Population awareness, adherence, detection and early treatment rely on eye care being integrated into diabetes programmes and services at all levels.

While diabetic eye care services are technically available in many areas of Nepal, there are limitations that prevent them from reaching all who need them. Despite services existing in most rural and urban areas, with coverage across district, regional, provincial, and even tertiary levels, some patients face significant barriers. These barriers include the cost of treatment itself, and the challenges of transportation to reach these facilities, particularly for those living in remote locations. This limited access can have serious consequences for diabetic individuals, potentially leading to vision loss if left untreated.

To effectively address diabetic retinopathy, a leading cause of vision loss, Nepal requires a comprehensive approach. This includes developing evidence-based programs for detection, treatment, referral, and periodic follow-up of the condition. These programs should be informed by best practices and tailored to the specific needs of the country. Following development, it's crucial to implement these management guidelines across healthcare facilities. To ensure effectiveness, monitoring clinician and patient adherence to recommended periodic eye examinations for all diabetic patients, even those without symptoms, is essential. Furthermore,

raising awareness among stakeholders, including national non-communicable disease (NCD) and diabetes programs, about the eye care needs of diabetic individuals is critical to fostering collaboration and ensuring integrated care. Finally, conducting the WHO Tool for the Assessment of Diabetes and Diabetic Retinopathy (TADDS) would provide valuable data to inform a comprehensive situation analysis. This analysis would highlight the current burden of diabetic retinopathy and guide future interventions to improve eye care for diabetic patients in Nepal.

11. INTEGRATED REFRACTIVE AND OPTICAL SERVICES

WHO Definition: Refractive services refer to an assessment of the corrective needs of a person with uncorrected refractive error. Optical services refer to provision of correction spectacles or contact lenses.

While some refractive and optical services exist in Nepal, access remains uneven. These services, often delivered through community eye centers, private clinics, and eye hospitals, typically require full payment from patients or rely on partial health insurance coverage. This financial barrier, coupled with the limited availability of services in rural areas, creates significant challenges for those seeking care. Transportation to these facilities can be another hurdle. To ensure equitable access, Nepal needs to advocate for a broader societal approach. This means recognizing the right of individuals with vision impairment or blindness, even those whose conditions cannot be fully treated, to participate fully in society. By acknowledging this right and addressing accessibility issues, Nepal can work towards a more inclusive and equitable system for all citizens in need of refractive and optical services.

To address affordability and accessibility of eye care services in Nepal, a multi-pronged approach is needed. Firstly, developing policies and plans for integrated and decentralized services is crucial. This could involve providing rehabilitation and habilitation services within existing primary and secondary healthcare settings, leveraging existing infrastructure and personnel. Secondly, advocating for the government to classify eyeglasses as a subsidized medical device with a VAT (Value Added Tax) reduction would significantly reduce their cost. Additionally, exploring the inclusion of eye care services within national health insurance plans would further improve financial accessibility.

Furthermore, a focus on human resources is essential. Training and recruiting qualified professionals for government health services would expand the workforce and improve service availability. However, attracting and retaining talent requires competitive salaries and career development opportunities. Finally, raising public awareness about the availability of services and addressing the stigma associated with vision problems is crucial. Community education campaigns can utilize various channels to reach the population. By tackling cost barriers, expanding service access, and promoting awareness, Nepal can create a more equitable and sustainable eye care system for all.

12. INTEGRATED LOW-VISION AND VISION REHABILITATION SERVICES

WHO Definition: Low-vision and vision rehabilitation services are for people who have residual vision that can be used and enhanced by aids, making them fully functional. Services may include provision of habilitation, rehabilitation, assistive technology and assistance and support services.

Access to low-vision and vision rehabilitation services in Nepal is currently limited. These crucial services, which can significantly improve quality of life for those with vision impairment, are only available in a few scattered locations, primarily within large hospitals. This restricted availability creates a significant barrier, particularly for those living in remote areas or with limited financial resources. Essentially, the system only caters to a select few, leaving many who could benefit without the support they need.

To empower individuals with vision impairment and blindness, a holistic approach is needed. First, advocating for societal responsibility to ensure their equal participation is crucial. This means recognizing their rights and creating an inclusive environment. Second, developing integrated and decentralized policies and plans is key. This could involve providing rehabilitation and habilitation services within existing primary and secondary healthcare settings, bringing support closer to those who need it most. Third, addressing the financial burden is essential. Establishing funding mechanisms and reducing out-of-pocket costs will ensure accessibility for everyone, regardless of financial limitations. Fourth, investing in professional training will equip healthcare workers with the skills to deliver essential services effectively. Finally, raising public awareness of available services is crucial to ensure individuals with vision impairment know where to find the support they need. By implementing these combined strategies, Nepal can create a more inclusive and supportive environment for people with visual impairments.

BLOCK 3: SERVICE DELIVERY – QUALITY

13. EXTENT TO WHICH EYE CARE SERVICES ARE DELIVERED IN A TIMELY WAY AND ALONG A CONTINUUM, WITH EFFECTIVE REFERRAL PRACTICES

WHO Definition: Timely refers to eye care being provided quickly, or as required, after a need is recognized. It includes care delivered on a continuum that results in a smooth transition between health services. Referral practices are highlighted as a key component in the achievement of timely care and are important for increasing access to care.

There is a moderate level of timely eye care across most levels of the healthcare system. Services are generally prompt, with only a few instances of waiting lists. The continuum of care for eye-related issues, as well as transitions between eye care and other services, is moderately smooth and occurs at a moderate frequency. While some efforts and mechanisms exist to achieve this, there is a need for more. These efforts may include implementing models of care, establishing clear referral pathways, enhancing two-way clinical referral communication, providing comprehensive service directories, and strengthening case management and coordination.

Conducting a health system referral assessment is crucial to identifying current issues within the referral system, including assessing levels of patient satisfaction and confidence in services at each level. Additionally, identifying solutions to enhance service efficiency and reduce waiting lists is essential for implementation. Another identified approach may involve policy changes to address common issues, such as the overuse of hospitals in urban areas and underuse in rural areas or among disadvantaged groups. Strengthening mechanisms to support a continuum of care, such as developing clinical guidelines, refining referral practices, improving case management, and expanding service directories, is also recommended.

14. EXTENT TO WHICH EYE CARE SERVICES ARE PERSON-CENTRED, FLEXIABLE AND ENGAGE PATIENTS IN DECISION-MAKING

WHO Definition: Person-centred care refers to the way in which care is delivered; it is a way of thinking and doing things that sees people as equal partners in planning, and supports individualized, flexible adaptation and adjustment of care to meet the person's needs and priorities.

The concept and practice of person-centered care are moderately understood across the healthcare sector, and there is a moderate level of person-centered eye care. The delivery of eye care is at times customized and adjusted to meet the needs and priorities of patients and their families.

Eye care professionals require training in person-centered care. Additionally, efforts should be made to promote education and empower users and their families or carers in eye care, along with the creation of more educational materials for families. It is crucial to strengthen community participation to incorporate the input of users and their families into services decision-making, facilitating the delivery of flexible and tailored services. Developing case management and coordination practices that engage users in decision-making is essential for delivering eye care that is both flexible and tailored.

15. EYE CARE SERVICES ACCEPTABILITY AND ADHERENCE

WHO Definition: This refers to people's willingness to seek eye care – an indication that people are not discouraged from seeking services by factors such as cost or accessibility. Acceptability is high when users perceive services to be of good quality, effective, socially and culturally appropriate, accessible and convenient.

Several factors contribute to the low utilization of eye care services in Nepal. Firstly, the community often perceives these services as being of poor quality and limited effectiveness. This perception leads to a lack of trust and ultimately, low demand. Additionally, the way services are currently organized and delivered creates significant inconvenience for many. Reaching appropriate care facilities can be difficult due to factors like distance, transportation limitations, or inconvenient operating hours. Finally, the composition of the eye care workforce often lacks the diversity needed to deliver culturally appropriate and acceptable services. This can be a barrier for certain populations who may feel less comfortable seeking care from providers who don't share their background or language. Addressing these issues is crucial to improve access and utilization of eye care services in Nepal.

To ensure high-quality and culturally sensitive eye care, Nepal can take several actions. First, actively addressing concerns about service quality is crucial. This might involve patient satisfaction surveys, feedback mechanisms, and continuous quality improvement initiatives. Second, including patients or representative groups in committees and working groups fosters patient-centered care. Their participation allows for planning services that are convenient, culturally safe, and address the specific needs of the population. Third, providing information in a variety of accessible formats, like written and spoken materials, visuals, and demonstrations, empowers patients and families to make informed decisions about their eye health. Additionally, healthcare facilities should strive to improve eye health literacy environments, ensuring information complexity matches the needs of users. Furthermore, ongoing staff training and a diverse workforce that reflects the population's social and cultural makeup are essential for delivering culturally competent care. By implementing these strategies, Nepal can create a more responsive and user-centered eye care system that prioritizes both quality and patient experience.

16. EXTENT TO WHICH EYE CARE INTERVENTIONS ARE EVIDENCE BASED

WHO Definition: Evidence-based eye care interventions are those that have been peer-reviewed, documented and show empirical evidence of effectiveness.

A significant challenge facing Nepal's eye care system is the limited use of evidence-based interventions. Currently, there are only a few national clinical practice guidelines, protocols, and standards available. While these provide some support for incorporating evidence-based approaches, a significant gap exists. This lack of comprehensive guidance hinders the widespread adoption of proven and effective eye care interventions.

To strengthen the delivery of eye care in Nepal, a focus on both standardization and workforce development is crucial. Firstly, developing clinical practice guidelines, standards of care, and models of care for priority eye conditions will provide a consistent framework for diagnosis and treatment. These resources will ensure a higher quality of care across different facilities and regions. Secondly, promoting adherence to these guidelines and standards through audits and feedback mechanisms is essential. Thirdly, fostering multidisciplinary teamwork

will allow healthcare professionals from various disciplines to collaborate effectively, leading to more comprehensive patient care.

Investing in the workforce is equally important. Strengthening the standard of education for eye care professionals and providing ongoing professional development opportunities will ensure they have the latest knowledge and skills to deliver high-quality care. Developing robust supervision and mentoring programs can further support and guide new professionals in their practice. Finally, building research capacity within the eye care sector will allow Nepal to address its specific needs and inform future improvements in service delivery. This comprehensive approach will ensure a more skilled and competent eye care workforce, ultimately leading to better patient outcomes.

17. SAFTEY OF EYE CARE SERVICES

WHO Definition: Patient safety refers to the absence of preventable harm to a patient during the process of providing eye care and to keeping the risk of unnecessary harm associated with eye care provision to an acceptable minimum. Unsafe medical care may lead patients, especially in low-income countries, to opt out of using the formal health care system, thereby making unsafe care a significant barrier to access for many of the world's poor. Quality and safety of patient care are intimately linked with clinical and organizational governance and management.

Patient safety in Nepal's eye care system faces significant challenges. Currently, healthcare in general lacks established mechanisms to ensure safe care delivery, and eye care services are particularly poorly integrated into these existing practices. This translates to a very low level of patient safety. Furthermore, the crucial systems for quality improvement, quality assurance, and quality learning are not implemented across eye care. Practices like incident reporting, which are essential for identifying and addressing safety concerns, are not routinely followed. Addressing these deficiencies is critical to ensuring that eye care services in Nepal are delivered in a safe and effective manner.

To ensure patient safety in eye care, a multi-pronged approach is needed. First, it's crucial to integrate eye care into existing healthcare safety mechanisms. This ensures consistent safety protocols are followed across the entire healthcare system. Second, strengthening the leadership of national ophthalmology professional associations or colleges in matters of quality and safety is essential. Their guidance can set high standards and promote best practices. Third, fostering a culture of reporting patient safety incidents is critical. By encouraging open communication of errors and near misses, opportunities for improvement can be identified and addressed. Furthermore, involving and communicating with patients and the public is vital. Educating patients about their rights and encouraging open communication with healthcare providers can empower them to participate actively in their own care. Finally, promoting the submission of clinician-driven quality improvement reports specific to eye care can provide valuable insights into areas for improvement and drive ongoing safety enhancements. By implementing these actions, Nepal can create a more robust and patient-centered approach to eye care safety.

18. MULTILEVEL ACCOUNTABILITY FOR PERFORMANCE OF EYE CARE SERVICES

WHO Definition: This refers to accountability at the level of individual health personnel, health service providers and governing agencies. Accountability means roles and responsibilities are clear and people are held to account. Accountability and transparency occur when there is acceptance of the consequences of actions for the areas of health for which people assume responsibility.

A significant challenge to improving eye care in Nepal is the weak accountability framework within governing agencies, service providers, and healthcare personnel. This manifests in two keyways. Firstly, there is a low level of clarity regarding roles and responsibilities. This confusion can lead to a lack of ownership and hinder overall effectiveness. Secondly, accountability mechanisms are weak or non-existent. There are few established systems for reporting on performance against baselines and targets. Furthermore, a system of rewards and sanctions to incentivize good performance and discourage deficiencies is largely absent. Strengthening accountability across all stakeholders is crucial to ensure everyone involved in eye care delivery is working towards shared goals and achieving optimal outcomes for patients.

To ensure transparency and continuous improvement in eye care delivery, a robust accountability framework is needed. This framework would encompass several key elements. First, establishing a monitoring and evaluation framework with clear performance measurement indicators is crucial. This allows for regular assessment of progress towards established goals. Second, implementing mechanisms for quality assurance, service audits, and service user feedback would provide valuable insights into the quality of care being delivered. Third, clearly defining and documenting the governance and accountability structure for eye care is essential. This should delineate the roles and responsibilities of all stakeholders, fostering ownership and clear lines of responsibility. Fourth, establishing regular reporting requirements would ensure data is collected and analyzed to track progress and identify areas for improvement. Finally, while the use of sanctions should be approached cautiously, considering a system of rewards and recognition for exceeding targets or demonstrating exceptional performance can incentivize excellence within the eye care system. By implementing these comprehensive measures, Nepal can create a more accountable and effective eye care system that delivers better outcomes for all.

BLOCK 4: WORKFORCE AND INFRASTRUCTURE

19. WORKFORCE AVAILABILITY

WHO Definition: This refers to the availability of eye care personnel such as ophthalmologists, optometrists and allied ophthalmic personnel.

A significant challenge to expanding eye care in Nepal is the workforce shortage. There's a mismatch between the number of available eye care personnel and the growing demand for services, particularly outside urban centers and at the primary level of care. This creates moderate staffing gaps that hinder accessibility, especially in rural areas. The current rate of graduates is unlikely to meet future demand, potentially exacerbating the situation in the coming years. Furthermore, all types of human resources (ophthalmologist, optometrist, and allied eye health personnel) are highest in Bagmati Province and lowest in Karnali Province. Addressing this workforce gap through targeted recruitment strategies, training initiatives, and improved incentives for deployment in underserved areas is crucial to ensuring equitable access to eye care across Nepal.

To ensure adequate staffing across the eye care system, a multi-pronged approach is needed. First, conducting a comprehensive analysis of the existing eye care workforce is crucial. This analysis should assess the current numbers, skillsets, and distribution of personnel. Based on this data, targeted strategies can be developed. One key action is to establish new eye care training programs, particularly for opticians. This would expand the pool of qualified professionals to meet growing needs. Furthermore, it's essential to identify areas of chronic workforce shortages - both at different levels of the healthcare system (primary, secondary, etc.) and geographically. Once these areas are identified, specific strategies to address the shortages can be developed. This might involve offering targeted incentives for working in underserved regions, such as scholarships or loan repayment programs. Finally, prioritizing eye care workforce development for the primary level of care is essential. This will increase access to basic eye services for a wider population, forming the foundation for a robust eye care system in Nepal.

20. WORKFORCE TRAINING AND COMPETENCIES

WHO Definition: This refers to the undergraduate, postgraduate and other training that ensures development of an appropriate set of eye care competencies in the health workforce, comprising of ophthalmologists, optometrists, ophthalmic nurses, orthoptists and opticians.

While Nepal has made progress in eye care workforce planning, there is room for further improvement. Currently, planning practices are at a moderate level, with some integration into wider health workforce planning efforts. Planning exercises have been conducted regularly, but haven't always achieved a consistent, comprehensive approach. Data collection on eye care personnel is ongoing, but there are still some information gaps in certain areas. Addressing these inconsistencies and filling in the data gaps will be crucial for developing a robust and well-informed eye care workforce plan that meets the future needs of Nepal's population.

To strengthen the eye care workforce in Nepal, a multi-pronged approach is needed. First, establishing a mechanism to collect data on the existing ophthalmic workforce is crucial. This data will provide a clear picture of current staffing levels, skillsets, and geographical distribution. Second, eye care workforce planning must be integrated into broader health workforce planning initiatives. This ensures a coordinated approach to addressing personnel needs across the entire healthcare system. Third, developing a specific plan for the eye care workforce

is essential. This plan could include strategies for recruitment, training, deployment, and retention of qualified personnel, particularly at the primary level of care where there is a significant gap. Finally, ensuring a system of government-endorsed licensing for ophthalmologists and optometrists, as a minimum requirement for eye care professionals, is crucial. This will help to guarantee competence and maintain high standards within the workforce. By implementing these actions, Nepal can build a more robust and sustainable eye care workforce, ultimately leading to improved access and quality of eye care services for all citizens.

21. WORKFORCE PLANNING AND MANAGEMENT

> ***WHO Definition***: This refers to the leadership, management, planning and implementation of initiatives that strengthen the eye care workforce.

While Nepal has made progress in eye care workforce planning, there is room for further improvement. Currently, planning practices are at a moderate level, with some integration into wider health workforce planning efforts. Planning exercises have been conducted regularly, but haven't always achieved a consistent, comprehensive approach. Data collection on eye care personnel is ongoing, but there are still some information gaps in certain areas. Addressing these inconsistencies and filling in the data gaps will be crucial for developing a robust and well-informed eye care workforce plan that meets the future needs of Nepal's population.

To strengthen the eye care workforce in Nepal, a multi-pronged approach is needed. First, establishing a mechanism to collect data on the existing ophthalmic workforce is crucial. This data will provide a clear picture of current staffing levels, skillsets, and geographical distribution. Second, eye care workforce planning must be integrated into broader health workforce planning initiatives. This ensures a coordinated approach to addressing personnel needs across the entire healthcare system. Third, developing a specific plan for the eye care workforce is essential. This plan could include strategies for recruitment, training, deployment, and retention of qualified personnel, particularly at the primary level of care where there is a significant gap. Finally, ensuring a system of government-endorsed licensing for ophthalmologists and optometrists, as a minimum requirement for eye care professionals, is crucial. This will help to guarantee competence and maintain high standards within the workforce. By implementing these actions, Nepal can build a more robust and sustainable eye care workforce, ultimately leading to improved access and quality of eye care services for all citizens.

22. REFRACTIVE AND OPTICAL SERVICES REGULATION

> ***WHO Definition***: Regulations refer to service quality, staff training and dual practice. Refractive services refer to an assessment of the corrective needs of a person with uncorrected refractive error. Optical services refer to provision of correction spectacles or contact lenses.

Regulations exist for the private sector when it comes to refractive and optical services. While optometrists and ophthalmic assistants need government-issued licenses to practice, opticians, whose training is shorter and less academic, do not require such licensing. This distinction carries over to educational institutions as well. Optometry and ophthalmic assistant programs must be nationally accredited by a government body, ensuring a standardized level of education. However, there's no such accreditation requirement for institutions training opticians.

To optimize refractive and optical care within the healthcare system, a multi-pronged approach is recommended. Firstly, we advocate for the development of a strategy to seamlessly integrate these services, encompassing both improved training programs and a clear plan for system-wide implementation. Secondly, we urge the Medical Education Commission to mandate government accreditation for all optometrists, ophthalmic assistants, and opticians. This ensures a standardized level of education across all professions. There is also a critical need to recognize spectacles as medical devices to improve access and affordability. Further, classifying spectacles as medical devices would allow for better regulatory oversight, quality assurance, and potential inclusion in national health insurance schemes. Furthermore, a comprehensive situation analysis is needed to assess the current scope, effectiveness, and quality of refractive and optical services. This analysis would provide valuable insights to guide future improvements. Finally, we advocate for strong collaboration between public and private sectors. By working together, they can ensure comprehensive refractive and optical service coverage, making it accessible to everyone. Additionally, strengthening or even developing clear career pathways within the public healthcare system would incentivize optometrists and ophthalmic assistants to pursue careers in this vital field.

23. WORKFORCE MOBILITY, MOTIVATION AND SUPPORT

WHO Definition: Mobility refers to the impact of international mobility of eye care professionals on the availability and effectiveness of the workforce. Motivation refers to the degree of willingness and effort towards attaining organizational or client goals demonstrated by eye care personnel. Support refers to the extent of support experienced in a workplace with a focus on workplace support and supervision mechanisms.

The eye care field faces challenges in retaining its workforce. International mobility, where qualified personnel readily leave for opportunities abroad, weakens the domestic talent pool. Furthermore, motivation can be moderate to low, potentially due to limited compensation or other factors leading to absenteeism. While the professions themselves might hold some appeal, attracting individuals to the necessary undergraduate training can be difficult. This situation is compounded by a lack of readily available support and supervision for existing personnel, hindering professional development and potentially leading to burnout.

To address the motivational challenges within the eye care workforce, a multi-faceted approach is crucial. Firstly, open communication with personnel is essential. By engaging with them directly about their concerns, we can identify and prioritize issues that are most amenable to solutions. Secondly, a particular focus should be placed on strengthening the support system for rural personnel. This may involve increasing access to supervision, mentorship, and potentially technological resources to bridge geographical divides. Furthermore, initiatives that elevate the public perception of eye care and showcase its critical impact on overall health outcomes are essential. Highlighting the profession's contribution fosters a sense of accomplishment and pride within the workforce. In tandem with these efforts, promoting eye care within the wider healthcare sector and ensuring its inclusion in healthcare planning ensures visibility and recognition. Finally, supporting extensive training opportunities and research activities fosters continuous learning and professional development, which ultimately leads to a more engaged and motivated workforce.

24. EYE CARE INFRASTRUCTURES AND EQUIPTMENT

WHO Definition: This refers to the physical infrastructure where eye care services are commonly delivered. It includes treatment rooms, dedicated centres and other infrastructure.

The infrastructure for eye care services presents a mixed picture. While most essential elements are present within the healthcare system, there are occasional gaps that hinder service delivery. Similarly, the equipment situation shows moderate availability, but deficiencies in distribution and maintenance across facilities can create inconsistencies in service quality.

To ensure long-term sustainability and effectiveness of eye care services, a strategic approach is needed. Firstly, strengthening infrastructure and maintenance should be prioritized in all future health facility planning. This ensures ongoing functionality and prevents disruptions in service delivery. Secondly, developing clear service standards that encompass essential ophthalmic equipment requirements for each level of the healthcare system is crucial. This standardized approach guarantees consistent service quality across facilities. Furthermore, integrating these equipment requirements into national healthcare service standards would provide a strong regulatory framework for implementation. Additionally, a review of the list of essential medicines, medical products, and technologies specific to eye care is necessary. Ensuring their consistent availability is vital for optimal patient care. Finally, incorporating eye care technicians and biomedical engineering curricula into existing training programs would create a skilled workforce to manage and maintain ophthalmic equipment effectively. This comprehensive strategy addresses both infrastructure and human resource needs, paving the way for a robust and enduring eye care service system.

BLOCK 5: FINANCING

25. POPULATION COVERED BY EYE CARE FINANCING MECHANISMS

WHO Definition: This refers to the health financing mechanisms and the extent to which those that include eye care services also cover the population. Common health financing mechanisms include government tax-based systems or the national health, private or social insurance systems.

financing mechanisms is limited, despite ample opportunities for expansion. This restricted approach results in limited funding available for eye care. Consequently, only a small portion of the population benefits from coverage for necessary eye care services.

To ensure equitable access to eye care, a comprehensive financing strategy is essential. We advocate for a universal approach, where everyone is included in a healthcare financing mechanism that covers eye health services. This eliminates the risk of specific population groups being excluded due to financial limitations. Furthermore, integrating eye care into existing healthcare financing mechanisms is crucial. By leveraging these established systems, we can expand coverage to encompass the entire population. Finally, recognizing that some disadvantaged groups may still face gaps in their eye care coverage, developing specific programs and initiatives to address these disparities is vital. This multi-pronged approach ensures financial accessibility to eye care services for all.

26. SCOPE AND RANGE OF EYE CARE INTERVENTIONS, SERVICES AND ASSISTIVE PRODUCTS INCLUDED IN HEALTH FINANCING

WHO Definition: This refers to the range of eye care interventions, services and assistive products that are financed and subsequently made available to the population. Assistive products include spectacles and low-vision devices.

Nepal offers financing and access to a moderate range of eye care interventions, services, and assistive products that address the population's needs. However, there are still some unmet needs that require attention. This highlights the need for further investment and program development to ensure a more comprehensive eye care system.

Aligning with Nepal's national universal health coverage strategy, we advocate for a significant expansion of eye care services. This includes integrating a wider scope and range of interventions, services, and assistive products (such as spectacles and low-vision devices) into existing health financing mechanisms. This should encompass not only financing itself, but also service package planning, ensuring a comprehensive approach to eye health delivery within the Nepalese healthcare system. To further strengthen this advocacy effort, conducting local research on the cost-effectiveness and positive impact of eye care interventions would be highly valuable. By demonstrating the clear benefits relative to their costs, such research can serve as a powerful tool to convince policymakers to dedicate more resources to eye care services.

27. FINANCING OF EYE CARE AND OUT-OF-POCKET COSTS

WHO Definition: This refers to the extent to which eye care is financed, impacting the proportion of out-of-pocket costs. The out-of-pocket costs refer to costs paid by consumers when accessing eye care services; this includes fees for services and assistive products as well as other expenses related to accessing the services. Assistive products include spectacles and low-vision devices.

Nepal's current approach to financing eye care creates significant access barriers. The limited funding allocated to eye care interventions, including essential assistive products like spectacles, translates to frequent out-of-pocket expenses for patients. These fees often pose a significant burden, particularly for low-income individuals and those with chronic eye conditions requiring ongoing care. Furthermore, the lack of dedicated funds or support for travel and other expenses associated with accessing services further restricts utilization. This results in a high prevalence of catastrophic health expenditures stemming from eye care needs. The limited use of risk-pooling mechanisms within the health financing system exacerbates the issue, leaving many vulnerable to financial hardship when faced with eye care costs.

To address the financial burden of eye care in Nepal and prevent catastrophic health expenditure, a multi-pronged approach is needed. Firstly, increasing funding support specifically allocated for high-cost eye care interventions is crucial. This targeted investment prioritizes procedures that pose the greatest financial risk to patients. Secondly, the existing fee structure for eye care services should be reviewed to better accommodate the reality of repeated and often long-term treatment needs. This may involve implementing capped fees or tiered payment options for chronic conditions. Finally, a close examination of out-of-pocket costs for essential services like cataract surgery and spectacles within the public healthcare system is vital. Developing sustainable strategies, such as price negotiation with suppliers or the introduction of subsidies, can significantly improve affordability for low-income populations. These combined measures can ensure that eye care services are accessible and financially manageable for all Nepalese citizens.

BLOCK 6: INFORMATION

28. HEALTH SYSTEMS DATA ON AVAILABILITY AND UTILIZATION OF EYE CARE SERVICES

WHO Definition: This refers to the availability of information regarding where eye care services are available and where they exist across the health services. It also includes information about the extent of utilization of eye care services and the features of this utilization, for example, age and geographic area.

Nepal's current eye health data collection faces significant challenges. Health information systems lack the capacity to reliably report on the location and types of eye care services offered throughout the healthcare system. While a limited number of reports exist, including situation assessments and utilization studies, these often have substantial gaps. This lack of comprehensive data makes it difficult to understand the true scope of eye care services available and how effectively they are being utilized.

To improve understanding of eye care services in Nepal, the integrated health management information system (IHMIS) needs an overhaul. First, ensure basic information about available eye care services is comprehensively collected. IHMIS should be strengthened to guarantee regular recording, reporting, and data completeness for these services. Existing data should be assessed and improved upon for accuracy. Additionally, consider collecting data on service utilization through periodic surveys or population-based studies. Finally, implement a disaggregated reporting system categorized by nationality to better understand service access for all populations. These steps will provide a clearer picture of eye care availability, utilization, and potential disparities.

29. INFORMATION ON OUTCOMES AND QUALITY OF EYE CARE SERVICES

WHO Definition: This refers to the extent that information on the functioning outcome of eye care interventions is collected. It also refers to the extent that information about the quality of eye care services is available, for example, the timeliness, patient satisfaction, and safety.

Nepal's healthcare information systems fall short in comprehensively capturing eye care service availability and utilization. While a limited number of situation assessments, evaluations, and reports exist, significant gaps remain. This lack of detailed and reliable data makes it difficult to pinpoint exactly where and what services are offered, hindering effective planning and resource allocation. Furthermore, the health information systems also produce a low level of reliable reporting on the utilization of eye care services. Without a clear understanding of how often and by whom these services are being accessed, it's challenging to assess the system's effectiveness and identify areas for improvement.

To strengthen Nepal's eye care system, a robust research infrastructure is essential. We advocate for supporting and potentially building dedicated eye research capacity. This initiative should involve establishing clear national priorities for research focus, ensuring its relevance to policy and program development. Furthermore, fostering strong linkages between eye researchers and policymakers is crucial. Open communication channels allow research findings to directly inform policy decisions and program design. In tandem with these efforts, implementing a system to monitor and evaluate eye care outcomes is necessary. This includes monitoring cataract surgery outcomes to ensure quality of care, while also collecting data on efficiency metrics. Finally, making all eye care outcomes data readily available to national health information systems (HIS) is paramount. This centralized data repository allows for comprehensive analysis, guiding future improvements and resource allocation within the eye care sector.

30. POPULATION-BASED DATA ON PREVALENCE AND TRENDS OF EYE CONDITIONS AND VISION IMPAIRMENT

WHO Definition: This refers to the availability of population-level data on eye conditions and vision impairment, to assess current levels of service provision and predict need for services in a country.

Nepal has made strides in understanding the eye health needs of its population. Periodic population surveys conducted over the past decade provide reliable and comprehensive data on eye conditions and visual impairment. The country also possesses a moderate level of technical capacity for data collection, analysis, and reporting. This allows for partially coordinated and harmonized information. However, there is still room for improvement. While a moderate amount of information and reports exist, a more in-depth understanding of the prevalence and trends of eye conditions is needed to inform future planning and resource allocation.

To gain a deeper understanding of Nepal's eye health landscape, a two-pronged approach is recommended. Firstly, implementing intermittent epidemiological surveys for eye conditions and visual impairment is crucial. Regularly conducted surveys provide ongoing data on the prevalence and trends of various eye diseases, allowing for timely identification of emerging concerns. Secondly, building capacity in eye care research is essential. This involves investing in training programs, fostering collaboration with international researchers, and potentially establishing dedicated research institutions. By strengthening research expertise, Nepal can conduct more in-depth analyses of specific eye health trends within different population groups. This detailed information is vital for tailoring eye care services and resource allocation to effectively address the unique needs of each segment of the population.

31. USE OF EVIDENCE FOR DECISION-MAKING AND PLANNING

WHO Definition: This refers to the extent to which relevant eye care information is available and utilized by decisionmakers. During the process of health and or eye care policy and programme planning.

Nepal's eye care system demonstrates a positive aspect in its information flow. Routine reports on the status, performance, and quality of eye care services provide decision-makers with a strong foundation for informed choices. This is further bolstered by the frequent utilization of various information sources in planning and program development. Decision-makers actively consider international evidence, national reports, and research findings, as demonstrated by existing examples. This data-driven approach positions Nepal well for continuous improvement within its eye care sector.

Despite the positive aspects of Nepal's eye care information flow, there's room for further optimization. To this end, a three-step approach is recommended. Firstly, undertaking a situation assessment of eye care data collection and utilization is crucial. This analysis would identify existing strengths and weaknesses in the current system, highlighting areas for improvement. Secondly, developing and implementing a dedicated eye care monitoring, evaluation, and review platform would be highly beneficial. Such a platform would serve as a

centralized repository for all eye care data, allowing for comprehensive analysis and trend identification. Finally, with a robust data infrastructure in place, efforts should focus on building data utilization practices across eye care planning. This involves strengthening collaboration between researchers and policymakers by integrating data analysis into all aspects of planning, ensuring that decision-making is firmly grounded in evidence and facilitates continuous improvement within the eye care sector.

Summary of the Maturity Level in Each Indicator

Blocks	SN	Indicators	Maturity level		
			Level	Average	Rank
Leadership and governance	1	Leadership, coordination, and coalition- building for eye care	3	10	3
	2	Eye care integration into legislation, policies, and plans	3		
	3	Integration of eye care across relevant sectors and programmes	2		
	4	Reorientation of eye care services towards primary eye care within primary health care	2		
Service delivery – access	5	Equity of eye care services coverage across disadvantaged population groups	2	16	2
	6	Primary level eye care services	1		
	7	Community-delivered eye care services	3		
	8	Integrated paediatric eye care services	1		
	9	Integrated cataract surgical services	3		
	10	Integrated diabetic eye care services	3		
	11	Integrated refractive and optical services	2		

	12	Integrated low-vision and vision rehabilitation services	1		
Service delivery – quality	13	Extend to which eye care services are timely delivered and along a continuum, with effective referral practices	3	12	2
	14	Extend to which eye care services are person-centred, flexible and engage patients in decision-making	3		
	15	Eye care services acceptability and adherence	1		
	16	Extent to which eye care interventions are evidence based	2		
	17	Safety of eye care services	1		
	18	Multilevel accountability for performance of eye care services	2		
Workforce and infrastructure	19	Workforce availability	2	16	3
	20	Workforce training and competencies	3		
	21	Workforce planning and management	3		
	22	Refractive and optical services regulation	3		
	23	Workforce mobility, motivation and support	2		
	24	Eye care infrastructure and equipment	3		
Financing	25	Population covered by eye care financing mechanisms	2	7	2
	26	Scope and range of eye care interventions, services and assistive products included in health financing	3		
	27	Financing of eye care and out-of-pocket costs	2		

Information	28	Health systems data on availability and utilization of eye care services	2	9	2
	29	Information on outcomes and quality of eye care services	1		
	30	Population-based data on prevalence and trends of eye conditions and visual impairment	3		
	31	Use of evidence for decision-making and planning	3		

Summary in Blocks

SN	Blocks	Maturity level		
		Level	Average	Rank
1	Leadership and governance	3	10	3
2	Service delivery – access	2	16	2
3	Service delivery – quality	3	12	2
4	Workforce and infrastructure	2	16	3
5	Financing	2	7	2
6	Information	2	9	2

CHAPTER IV: CONCLUSIONS

Nepal's Eye Care System: Progress and Challenges

Nepal's eye care system offers a glimpse of hope, but significant hurdles remain. While leadership demonstrates some political commitment with eye care integrated into national health policies, major gaps exist in service delivery, quality control, data collection, and financing.

Summary on Building Blocks:

- **Leadership and Governance:** Leadership is strong but political commitment needs improvement; integration of health policies is successful but could be better.
- **Service Delivery - Access:** Limited access to eye care disproportionately affects disadvantaged communities.
- **Service Delivery - Quality:** The community lacks access to high-quality eye care interventions.
- **Workforce and Infrastructure:** Eye care workforce is sufficient, and infrastructure is mostly available.
- **Financing:** Eye care costs are a burden, highlighting the need for better financing integration.
- **Information:** Improved data collection on eye care is crucial.

The Path Forward: Eye Care Strategy

This finding outlines the key areas for improvement in eye care services:

- Leadership and Governance: Strengthen political commitment to ensure successful integration of eye care into broader health policies.
- Service Delivery - Access: Address disparities by improving access to eye care for disadvantaged communities.
- Service Delivery - Quality: Invest in providing high-quality, evidence-based eye care interventions.
- Workforce and Infrastructure: Maintain sufficient staffing and infrastructure to meet current and future demands. Spectacles should be recognised as medical devices.
- Financing: Develop a more comprehensive financing approach to reduce the burden of eye care costs.
- Information: Implement improved data collection systems to monitor service utilization, outcomes, and quality of care. Enhance collaboration between researchers and policymakers.

By addressing these areas, we can ensure everyone has access to the high-quality eye care they deserve

RECOMMENDED ACTIONS

Component	Recommended actions based on current situation
Block 1: Leadership and governance	
1. Leadership, coordination and coalition-building for eye care	• Establish a dedicated unit in each level of government to address unmet needs, ensure financial sustainability, and expand access to eye care. Additionally, integrate comprehensive eye care services into existing health insurance plans and develop measurable long-term goals with clear indicators of progress
2. Eye care integration into legislation, policies and plans	• Consolidate the integration of comprehensive and accessible eye care into legislation, policies, and plans
3. Integration of eye care across relevant sectors and programmes	• Engage all stakeholders, including non-health stakeholders, to integrate in the planning and coordination of services at all levels.
4. Reorientation of eye care services towards primary eye care within primary	• Prioritize primary and community eye care services, ensuring adequate funding, workforce training, and coordination with other services for effective referral systems.
Block 2: Service delivery – access	
5. Equity of eye care services coverage across disadvantaged population groups	• Identify disadvantage groups and address equitable quality eye care through adopt collaborative engagement.
6. Primary level eye care services integrated into primary health care	• Expand accessibility & coverage of integrate of eye care services into primary healthcare facilities across local levels (Palika)
7. Community-delivered eye care services	• To expand accessible community-delivered eye care services, partner with locally available institutions
8. Integrated paediatric eye care services	• Develop standard guidelines for initiating and strengthening cross-sectoral screening and referral systems for children
9. Integrated cataract surgical services	• Ensure that cataract surgery services are accessible, high-quality, affordable, and sustainable for all patients experiencing vision loss, regardless of category
10. Integrated diabetic eye care services	• Develop evidence-based programs for diabetic retinopathy, informed by robust research on detection, treatment, referral, and follow-up care
11. Integrated refractive and optical services	• Expand and integrate refractive and optical services into primary healthcare (PHC) by training the necessary human resources for eye health (HREH)

12. Integrated low-vision and vision rehabilitation services	• Provision of accessible and affordable habilitation, rehabilitation, assistive technology and assistance and support services
Block 3: Service delivery – quality	
13. Extent to which services are delivered in a timely way and along a continuum, with effective referral	• Create a robust system for tracking progress in eye care access, continuity of care, and referral practices by implementing a comprehensive monitoring system and engaging all relevant stakeholders,
14. Extent to which eye care services are person-centred, flexible and engage patients in decision-making	• Integrate people-centered principles into the culture and practices of eye care delivery.
15. Eye care services acceptability and adherence	• To improve user experience and encourage people to seek eye care, ensure services are of good quality, effective, socially and culturally appropriate, accessible, and convenient
16. Extent to which eye care interventions are evidence based	• By building research capacity in the eye care sector, we can address the sector's needs and inform future improvements in service delivery, ultimately leading to better patient outcomes
17. Safety of eye care services	• By encouraging clinicians to submit quality improvement reports specific to eye care, valuable insights can be gained, leading to ongoing safety improvements.
18. Multilevel accountability for performance of eye care services	• Implement comprehensive measures to create a more accountable and effective eye care system that delivers better outcomes for all.
Block 4: Workforce and infrastructure	
19. Workforce availability	• Develop targeted training programs for eye care professionals, such as opticians and counsellors, to address knowledge gaps and enhance the delivery of eye care services
20. Workforce training and competencies	• Implement a Continuous Professional Development (CPD) program for ongoing skill and knowledge updates
21. Workforce planning and management	• Execute a system of regular workforce training and development that aligns with both international best practices and the specific needs of the Nepalese context
22. Refractive and optical services regulation	• Develop and implement a regulatory framework for monitoring and regulating refraction and optical services • Classify spectacles as medical devices to ensure quality assurance and improve access and affordability through inclusion in national health insurance schemes
23. Workforce mobility, motivation and support	• Cultivating a motivating atmosphere, providing ongoing professional development opportunities, and implementing strategies to attract and retain skilled personnel to combat staff turnover and build a robust eye care workforce.

24. Eye care infrastructure and equipment	• Establish national standards for eye care infrastructure and equipment, encompassing all service levels
Block 5: Financing	
25. Population covered by eye care financing mechanisms	• To reduce disparities in financial accessibility to eye care services for all, expand coverage by creating a comprehensive financial strategy that includes health insurance. This strategy should encourage participants to continue utilizing these insurance services.
26. Scope and range of eye care interventions, services and assistive products included in health financing	• Integrating a wider scope and range of eye care interventions, services, and assistive products (such as spectacles and low-vision devices) into existing health financing mechanisms.
27. Financing of eye care and out-of-pocket costs	• Ensure accessible and affordable eye care services for all Nepali citizens, thereby reducing out-of-pocket expenditures.
Block 6: Information	
28. Health systems data on availability and utilization of eye care services	• To better understand service access for all populations, implement an integrated health management information system across all eye health service providers. This system should include disaggregated reporting by nationality.
29. Information on outcomes and quality of eye care services	• Make all eye care outcomes data readily available to national health information systems to enable a centralized data repository for comprehensive analysis, guiding future improvements and resource allocation within the eye care sector.
30. Population-based data on prevalence and trends of eye conditions and vision impairment	• Implement intermittent epidemiological surveys as well as Rapid Assessments of Avoidable Visual Impairment and Blindness surveys to understand disease burden, trends, and required resources.
31. Use of evidence for decision-making and planning	• Integrate a robust data infrastructure and evidence-based practices into all aspects of planning for the eye care sector. This will ensure informed decision-making and facilitate continuous improvement. • Enhance collaboration between researchers and policymakers to promote evidence-based decision-making and sector improvements.

(*) indicates recommendations proposed during this process that were not present in the WHO ECSAT.

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