MINISTRY OF HEALTH

A NATIONAL EYE CARE PLAN
FOR
THE KINGDOM OF ESWATINI

2019 – 2022

“WORKING TOGETHER TOWARDS THE ELIMINATION OF AVOIDABLE BLINDNESS IN ESWATINI”
FOREWORD

The state of eye care in Africa stands in alarming contrast to the rest of the world, with preventable and treatable eye conditions being leading causes of blindness. Blindness has huge economic implications not only for individuals and communities but for the country as a whole. Poverty predisposes one to blindness and blindness exacerbates poverty through lost educational and employment opportunities; studies show that 90% of people living with severe visual impairment cannot work. This creates a great impediment to the countries poverty reduction efforts. Loss of sight therefore represents a profound public health, social and economic problem particularly for developing countries where 9 out of 10 of the world’s blind people live.

In recent resolutions the World Health Assembly has highlighted the importance of eliminating avoidable blindness as a public health problem. In May 2013 the 66th World Health Assembly adopted the “Universal Eye Health: a global action plan 2014-2019” with its corresponding resolution WHA66.4. This document has therefore been developed in line with this resolution. It translates the WHO “Vision 2020 – the right to sight” strategy into a local plan guided by Eswatini’s National Health Strategic Plan.

The plan aims to provide a unifying and well-coordinated focus on all national eye health interventions and activities. The Ministry of Health wishes to utilise this document to tighten collaboration with all development partners and encourage increased financial and technical support towards the implementation and strengthening of eye care services in Eswatini.

Through this plan Eswatini will join the rest of the world in reducing the burden of blindness and laying a sustainable foundation to ensure that in the near future no one remains needlessly blind.

DR. VUSI MAGAGULA
DIRECTOR OF HEALTH SERVICES
MINISTRY OF HEALTH
APPRECIATION

The Ministry of Health would like to extend its utmost appreciation towards the International Agency for the Prevention of Blindness as well as the WHO country office for the technical guidance and support offered during the development process of this document.
ACKNOWLEDGEMENT

The Ministry of Health further wishes to acknowledge all those who contributed in the formulation of this document; all the information contained herein is as a result of the collaborative efforts of the individuals, organisations/representatives and partners listed below:

- Mr Ronnie Graham, International Agency for the Prevention of Blindness.
- Mr Simon Day, Regional Program Coordinator, International Agency for the Prevention of Blindness.
- Professor Lloyd Hildebrand, Professor Emeritus, Department of Ophthalmology, University of Oklahoma, USA.
- Dr Jacquelyn Jetton O’Banion, Assistant Prof. of Ophthalmology, Assistant Director of Global Ophthalmology, Fellowship Director of Global Ophth., Emory University, USA.
- Dr Kevin Makadzange, Focal Person for NCD’s, WHO Country Office.
- Dr Velephi Okello, Deputy Director-Clinical Services, Ministry of Health.
- Dr Vincent Msiska, Ophthalmologist, Government Sector.
- Dr Jonathan Pons, Ophthalmologist, Good Shepherd (Mission) Hospital.
- Ms Angela Warbreck, Administrator, Good Shepherd Hospital Eye Clinic
- Ms Sindi Dube, Program Manager-Disability Unit, Deputy Prime Ministers Office.
- Ms Sharon Maseko, Optometrist, Government Sector.
- Mr Sibusiso Maseko, Optometrist, Government Sector.
- Ms Simphiwe Simelane, Optometrist, Government Sector.
- Dr Echo Vanderwal, Director, The Luke Commission.
- Rebekah Sartori, Medical & QA Manager, The Luke Commission
- Mr. Rogers Mamba, Director of Community & Public Relations, The Luke Commission
- Ms Mildred Xaba, Program Manager, School Health Unit.
- Ms Lungile Mathabela, Occupational Therapist, Government Sector.
- Sr Babazile Dlamini, Ophthalmic Nursing Sister, Government Sector.
- Mr Jose Braga Borges, Director, Eswatini Lions Club International.
- Mr Mandla Methula, President, Federation of Disabilities Persons in Eswatini (FODSWA).
- Mr. Bongani Makama, President, Swaziland Association of Visually Impaired Persons (SAVIP).
- Ms Gladys Dlamini, Ophthalmic Nurse, Government Sector.
- Ms Simphiwe Motso, Ophthalmic Nursing Sister, Government Sector.
- Ms Busisiwe Mavuso, Ophthalmic Nurse, Government Sector.
- Ms Sibongile Hhalaza, Ophthalmic Nursing Sister, Government Sector.
- Mr. Sifiso Mavuso, Senior Planning Officer, Ministry of Health
- Mr. Lucky Ngatha, Inspector of Schools – Special Education Needs, Ministry of Education
- Dr Tholakele Zwane, Ophthalmologist, Government Sector
Abbreviations

The following abbreviations were used throughout this document –

- **DD**: Deputy Director
- **CBM**: Christian Blind Mission
- **CCF**: Cataract Case Finder
- **CSR**: Cataract Surgical Rate
- **DB**: Database
- **DPMO**: Deputy Prime Minister’s Office
- **DR**: Diabetic Retinopathy
- **DRS**: Diabetic Retinopathy Screening
- **DRSS**: Diabetic Retinopathy Screening Service
- **FODSWA**: Federation of Organizations of Persons with Disabilities of Swaziland
- **GSH**: Good Shepherd Hospital
- **HReH**: Human Resources for Eye Health
- **HRH**: Human Resources for Health
- **IAPB**: International Agency for the Prevention of Blindness
- **IEC**: Information, Education and Communication
- **MGH**: Mbabane Government Hospital
- **MoET**: Ministry of Education and Training
- **MoH**: Ministry of Health
- **MTAD**: Ministry of Tinkhundla, Administration and Development
- **NCD**: Non-communicable diseases
- **NEC**: National Eye Care
- **NECC**: National Eye Care Co-ordinator
- **NECP**: National Eye Care Plan
- **PHC**: Primary Health Care Workers
- **RAAB**: Rapid Assessment of Avoidable Blindness
- **RFM**: Raleigh Fitkin Memorial Hospital
- **RHM**: Rural Health Motivator
- **SEN**: Special Education Needs
- **SAVIP**: Swaziland Association of Visually Impaired Persons
- **SSA**: Sub Saharan Africa
- **STT**: St. Theresa’s Eye Clinic
- **TLC**: The Luke Commission
- **TOR**: Terms of reference
- **TWG**: Technical Working Group
- **UNICEF**: United Nations International Children’s Emergency Fund
- **WHO**: World Health Organization
# Contents

1. INTRODUCTION & BACKGROUND ........................................................................................................... 7
   1.1 Country Background ............................................................................................................................ 7
   1.2 Health Care in Eswatini ..................................................................................................................... 7
   1.3 Global Perspectives on Eye Care ....................................................................................................... 8

2. BLINDNESS AND VISUAL IMPAIRMENT IN ESWATINI .................................................................... 8
   2.1 Major Blinding Diseases .................................................................................................................... 8
      2.1.1 Cataract .................................................................................................................................. 8
      2.1.2 Childhood Blindness ................................................................................................................ 9
      2.1.3 Uncorrected Refractive Errors and Low Vision ........................................................................ 9
      2.1.4 Diabetic Retinopathy .............................................................................................................. 10
      2.1.5 Glaucoma ............................................................................................................................... 10
      2.1.6 HIV/AIDS and TB related Eye Conditions .......................................................................... 10

3. CURRENT EYE CARE SERVICES .......................................................................................................... 10

4. HUMAN RESOURCES FOR EYE HEALTH (HReH) .......................................................................... 11

5. VISION, MISSION, PRINCIPLES AND OBJECTIVES .......................................................................... 11
   5.1 Vision ........................................................................................................................................... 12
   5.2 Mission ........................................................................................................................................ 12
   5.3 Principles and approaches ............................................................................................................ 12
   5.4 Goal ............................................................................................................................................ 12
   5.5 Objectives .................................................................................................................................. 12

6. EYE HEALTH SYSTEMS STRENGTHENING OBJECTIVES ............................................................. 13

7. OBJECTIVE 1: TO GENERATE EVIDENCE AND IMPROVE DELIVERY OF HEALTH SERVICES ...... 13
   7.1 Information and Research .............................................................................................................. 13
   7.2 Health Services ............................................................................................................................ 13
   7.3 Human Resource Development ................................................................................................. 17
   7.4 Infrastructure, equipment and supplies ..................................................................................... 18

8. OBJECTIVE 2: TO STRENGTHEN INTEGRATION AND COORDINATION OF EYE CARE SERVICES WITHIN OTHER RELEVANT HEALTH SERVICES AND STAKEHOLDERS. ................................................................. 19
   8.1 Social inclusion ............................................................................................................................ 19
   8.2 Special Education Needs (Inclusive education) ......................................................................... 20

9. OBJECTIVE 3: TO IMPROVE INTER-SECTORAL COLLABORATION WITH OTHER SECTORS ...... 21
   9.1 Governance and Leadership ......................................................................................................... 21
   9.2 Financing eye health services .................................................................................................... 22

10. MONITORING AND EVALUATION .................................................................................................... 22
10.1 Monitoring and Evaluation ................................................................. 23
Appendix I .................................................................................................. 24
National Eye Care Program Organization .............................................. 24
Appendix II ............................................................................................... 25
1. INTRODUCTION & BACKGROUND

1.1 Country Background

The Kingdom of Eswatini is located in Southern Africa and shares borders with South Africa and Mozambique. Since independence in 1968 the country has been governed by a monarchical parliament. Eswatini is a peaceful nation with little political discord and enjoys Lower Middle Income Country status with a per capita income estimated at US$2,860 in 2012.

According to the 2017 census the current population of Eswatini is estimated to be 1,093 238 million of which 77% lives in rural areas while 23% lives in urban areas. High levels of poverty and the high prevalence of HIV/AIDS explain many of the socio-economic challenges the country faces. The Eswatini Poverty Reduction Strategy and Action Plan estimates that 69% of the population lives below the upper poverty level of $71 per capita per month.

1.2 Health Care in Eswatini

Health services in Eswatini are guided by the 2nd National Health Sector Strategic Plan (2014-2018) and are based on a Primary Health Care strategy. They are organized in a decentralized manner providing health care at primary, secondary and tertiary levels. The country’s health system is loosely organised in a 4 tier system as follows:

- **Tier 1**: comprises of community based services provided by Community based health care workers, Faith based health care providers, Traditional healers, Traditional birth attendants as well as volunteers providing home based care, support and treatment.

- **Tier 2**: Is made up of Primary health care facilities consisting of 234 clinics and 7 Public Health Units which also conduct outreach services to neighbouring hard to reach areas.

- **Tier 3**: Consists of 5 Health Centres and 6 Regional hospitals; 2 of which are mission hospitals.

- **Tier 4**: comprises of 3 National referral hospitals; 2 of which are classified as speciality hospitals providing specialised TB and psychiatric services respectively.

The country has no official tertiary referral centre; Mbabane Government Hospital has partially filled this gap providing limited subspecialty care. The Kingdom of Eswatini has 50% of its medical personnel located in urban centres - serving 20% of the population. Traditional healers fill many of the gaps in formal care for the rural population. What is also of note is that currently eye care services in the kingdom are mainly established at the 3rd and 4th Tiers of services delivery i.e. at 3 regional hospitals as well as at the tertiary hospital, all located in urban areas. None of the countries community and primary health care facilities provide eye care services.
Despite the focus on HIV/AIDS in recent years, the total expenditure on healthcare by the government as a proportion of total government expenditures is still well below the 15% promised by the Abuja Declaration.

1.3 Global Perspectives on Eye Care

The World Health Organization (WHO) estimates that there are 39 million blind people and 285 million visually impaired in the world. It further estimates that 80% of blindness is avoidable. As the population ages and survival increases due to improvements in health care; the number of visually impaired and blind people is expected to grow in the coming years unless more is done to address the problem. In recognition of the growing burden of blindness globally, the World Health Organization and International Association for the Prevention of Blindness introduced the “Vision 2020-The Right to Sight” initiative in 1999. Since then, a number of additional resolutions have been passed by the World Health Assembly, most notably WHA66.4 of 2013 which launched Universal Eye Health: A Global Action Plan 2014-2019.

2. Blindness and Visual Impairment in Eswatini

There is very little published data regarding the burden of blindness in Eswatini. A 2008 WHO report estimated a 1% prevalence of blindness in Eswatini of which 50% is due to cataract. Based on this estimate, there are approximately 11,000 blind people in Eswatini of whom about 6,000 are blind from cataract. A 2003 community-based rapid assessment of cataract blindness found that while cataracts cause 50% of all blindness in Eswatini, only 20% of patients blind from cataract have had surgery. The main barriers to accessing cataract surgery were the high cost of surgery and a lack of understanding of what cataract surgery can offer. A 2011 survey also found that refractive error and presbyopia are significant causes of visual impairment in the country and that patients would benefit from ready-made spectacles.

2.1 Major Blinding Diseases

2.1.1 Cataract.

Cataract is the leading global cause of preventable blindness. According to the International Agency for the Prevention of Blindness (IAPB) in order to eliminate preventable blindness due to cataract in Africa a minimum cataract surgery rate (CSR) of 2000 cataract surgeries per million people per year should be performed.

<table>
<thead>
<tr>
<th>Facility</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mbabane Government Hospital</td>
<td>295</td>
<td>273</td>
<td>323</td>
<td>317</td>
<td>330</td>
</tr>
<tr>
<td>The Good Shepherd</td>
<td>589</td>
<td>521</td>
<td>550</td>
<td>582</td>
<td>862</td>
</tr>
<tr>
<td>The Luke Commission</td>
<td>-</td>
<td>-</td>
<td>262</td>
<td>261</td>
<td>235</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>884</strong></td>
<td><strong>794</strong></td>
<td><strong>1135</strong></td>
<td><strong>1160</strong></td>
<td><strong>1427</strong></td>
</tr>
</tbody>
</table>
2.1.2 Childhood Blindness
According to Eswatini’s 2017 population census Thirty six percent (36 %) of the Swazi population are children under the age of 15. Based on this number and reported incidence of up to 1 blind child/1000 in low income countries, there are approximately 500 blind children in Eswatini, culminating to 25,000 blind years. Reports show that nearly 40% of childhood blindness is preventable with appropriate management. Globally, the largest percentage of childhood blindness is due to amblyopia secondary to uncorrected refractive error. A study by Naidoo et al found that 1.4% of children in Durban, South Africa presented with a visual acuity worse than 20/40 and refractive error was the cause in 63% of the children. Based on these numbers it is estimated that in Eswatini 4,231 children have significant refractive errors and require spectacle correction.

2.1.3 Uncorrected Refractive Errors and Low Vision
It is estimated that the prevalence of uncorrected refractive error in adults (ages 16 years and older) is 5% and that almost all adults over 45 years of age are presbyopic and require reading glasses. Based on these estimates approximately 38,400 adults are in need of refractive correction and a further 130,000 are in need of reading glasses for presbyopia. In 2010, through an initiative between the Ministry of Health and Christian Blind Mission (CBM), a National Refraction and Low Vision Service was implemented to provide a sustainable and affordable supply of spectacles for the indigent population. This program has also made low vision aids more readily available to the general population and at an affordable cost.

Figure 1: Clients seen by public sector Optometrists in Eswatini 2013-2017
2.1.4 Diabetic Retinopathy
Diabetic retinopathy is a growing problem in the Eswatini population. The International Diabetes Federation estimates there will be a 98% increase in the number of patients diagnosed with diabetes in Sub-Saharan Africa (SSA) between 2010 and 2030[16]. In a recent retrospective review of patients with diabetes seen at Good Shepherd Eye Clinic 76% had proliferative diabetic retinopathy and 38% had visual acuity <3/60 at initial presentation.

2.1.5 Glaucoma
Glaucoma is recognized as a significant contributor to blindness. Data from Tanzania and Nigeria have reported that 29% of glaucoma patients and 53% of eyes are blind on presentation, highlighting a major obstacle to preventing blindness from glaucoma. Even when glaucoma is identified early, realistic treatment options in Eswatini are limited.

2.1.6 HIV/AIDS and TB related Eye Conditions
Eswatini has the highest prevalence of HIV/AIDS in the world. HIV itself leads to retinopathy similar to that caused by diabetes, which requires frequent monitoring and treatment. The immune compromised state of HIV patients also leads to increased systemic and ocular infections such as CMV retinitis, herpes and TB. These conditions can cause significant vision loss and require frequent follow-up care. Many drugs used to treat HIV and TB can cause vision loss due to toxicity when the dose is not monitored and adjusted according to the nutritional status of the patient. Patients with HIV/AIDS also have a much higher incidence of ocular surface neoplasia and severe vernal keratoconjunctivitis.

3. CURRENT EYE CARE SERVICES
In Eswatini eye care is delivered through two systems: 1) the public sector, comprised of the government health system and missionary hospitals/clinics, and 2) the private sector. In the public sector, the government health system for eye care includes three regional hospitals and a referral centre in Mbabane. The mission system delivering eye care services includes Good Shepherd Hospital, St. Teresa’s Eye Clinic, Raleigh Fitkin Memorial Hospital and The Luke Commission (TLC)

Patients receiving care through the government system incur minimal charges. All other services - medications, laser treatments, and minor procedures - are provided at no additional charge to the patient. Funding of the eye department within Mbabane Government Hospital is indirect, allocated from general funds provided to the hospital by the Ministry of Health. In mission eye clinics patients pay directly for clinic visits and surgeries based on a sliding scale. The Good Shepherd Hospital Eye Clinic is self-sustaining and manages its operational costs with funding support provided by CBM.
4. HUMAN RESOURCES FOR EYE HEALTH (HReH)

Health workers are the most important resource available in a health system. Without health workers there would be no delivery of quality eye health services to the deserving population of the kingdom.

(a) Ophthalmologists:
There are currently three (3) ophthalmologists in the country. The WHO recommends a minimum ratio of 1 ophthalmologist per 250,000 population. This means Eswatini should have 5 ophthalmologists.

(b) Optometrists
There is a total of 14 optometrists in Eswatini; 5 of whom are employed in the public sector, 2 are in mission facilities and 7 are in private practice. With respect to public sector optometry there is 1 Optometrist per 220,000 population. This is well below the WHO minimum recommendations of 1 optometrist per 50,000 persons.

(c) Ophthalmic Nurses
A total of 34 nurses have received training in eye care over the years. However, only 10 are actively working in public eye clinics and 8 in mission clinics. The current ratio of active ophthalmic nurse to population is 1:61,100.

(d) Primary Health Care (PHC) Workers
According to WHO recommendations an eye health component must form an essential part of the pre-service training and daily duties of all PHC staff. Primary eye care (PEC) and screening should be decentralized to ensure universal access even in hard to reach areas of the country. See Appendix 2 for a schematic representation. Currently none of the PHC nurses in Eswatini are trained in PEC.

(e) Cataract Case Finder (CCF)
A CCF is a non-medical worker who has been trained to test vision and identify cataracts in a community setting. They coordinate the eye health work of Rural Health Motivators (see below). There is currently only 1 CCF employed by the National Eye Care Program but unfortunately on the post of a driver. There is need for at least 1 CCF per region, i.e. 4 for Eswatini.

(f) Rural Health Motivators (RHMs)
RHMs provide the foundation for all health services in Eswatini, including eye health services. They are educated on common causes of vision loss, common eye diseases and how to perform vision screening. Through their education and efforts, patients with vision problems in the community can be identified and appropriately referred.

(g) Others
There are no ophthalmic equipment technicians in the country. The existing biomedical technicians unit under the Ministry of Health is currently being utilised to fill this gap. However this unit’s knowledge in eye care equipment is very minimal.

5. VISION, MISSION, PRINCIPLES AND OBJECTIVES
5.1 Vision
An Eswatini Nation in which nobody is needlessly visually impaired, where those with unavoidable vision loss can achieve their full potential, and where there is universal access to comprehensive eye health services.

5.2 Mission
To deliver comprehensive eye health services that are integrated into health, education and disability systems to reduce avoidable blindness and visual impairment as a public health problem and ensure that those with unavoidable vision loss can achieve their full potential in society.

5.3 Principles and approaches
1. **Universal access and equity**: All people should have equitable access to health care and opportunities in order to achieve or recover the highest attainable standard of health, regardless of age, gender or social position.

2. **Human rights**: Strategies and interventions for treatment, prevention and promotion must be compliant with international human rights conventions and agreements.

3. **Evidence-based practice**: Strategies and interventions for treatment, prevention and promotion need to be based on scientific evidence and good practice.

4. **Life course approach**: Eye health and related policies, plans, services and programmes need to take account of health and social needs at all stages of the life course.

5. **Empowerment of people with blindness and visual impairment**: Ensure that people who are blind or who have low vision can participate fully in the social, economic, political and cultural aspects of life.

5.4 Goal
To reduce avoidable blindness and visual impairment as a national public health problem and to secure full access to rehabilitation services and social integration for the visually impaired in Eswatini.

5.5 Objectives
The following 3 objectives are aligned with those of the WHO Global Action Plan and have been ‘domesticated’ to reflect realities in Eswatini.

**Objective 1: Evidence**
To make available to the Ministry of Health and other stakeholders, reliable data on the causes and prevalence of blindness and visual impairment in Eswatini.

**Objective 2: Integration**
To enhance collaboration with all other health programmes and to integrate an eye health component in all national plans/policies.

**Objective 3: Inter-sectoral Collaboration**
To develop an inclusive, multi-sectoral, national eye health committee by December 2019 with a full time National Eye Care Coordinator (NECC) in place.
6. EYE HEALTH SYSTEMS STRENGTHENING OBJECTIVES

This Comprehensive National Eye Health Strategy has adopted the 6 building blocks of health system strengthening as a framework to elucidate the more specific objectives and activities.

7. OBJECTIVE 1: TO GENERATE EVIDENCE AND IMPROVE DELIVERY OF HEALTH SERVICES

7.1 Information and Research

There is no recent and reliable data available for eye health in Eswatini. The countries Health management Information System (HMIS) has very few indicators capturing eye health.

Strategy: Develop efficient and improved data collection mechanisms and information on eye health service delivery.

a) Research

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicators</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Undertake a Rapid assessment of avoidable blindness (RAAB) in Eswatini</td>
<td>RAAB done</td>
<td>2019</td>
</tr>
<tr>
<td>3. Undertake annual audit of cataract surgery outcomes</td>
<td>submitted</td>
<td>annual</td>
</tr>
<tr>
<td>4. Piloting for an effective diabetic retinopathy screening service - protocols, equipment and a funding model are required</td>
<td>Report to be submitted</td>
<td>2019</td>
</tr>
</tbody>
</table>

b) Information

Strategy: Establish Eye Health indicators for Eswatini. To have in place a timely and reliable information management system

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conduct a review of the IAPB Database (DB)</td>
<td>IAPB DB review report produced</td>
<td>annual</td>
</tr>
<tr>
<td>2. Integrate national eye health indicators into HMIS</td>
<td>Integration into HMIS completed</td>
<td>2020</td>
</tr>
<tr>
<td>3. Establish Eye Health indicators for Eswatini</td>
<td>List of indicators produced</td>
<td>2019</td>
</tr>
<tr>
<td>4. Develop IEC material to raise public awareness</td>
<td>Material produced</td>
<td>2019</td>
</tr>
<tr>
<td>5. Conduct health education and awareness campaigns</td>
<td>No. of campaigns conducted</td>
<td>annual</td>
</tr>
</tbody>
</table>

7.2 Health Services

Strategy

To reduce avoidable blindness and visual impairment in Eswatini by 25% by 2022 through strengthening promotive, preventive, curative and rehabilitative services.
a) Cataract blindness:

**Strategy:** Strengthen the delivery of quality and comprehensive cataract surgical services and ensuring an increase in the CSR in Eswatini to 2000 by the year 2022.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop &amp; disseminate IEC material for uptake of cataract services</td>
<td>Material developed</td>
<td>2019</td>
</tr>
<tr>
<td>2. Equipping of 3 additional centres offering cataract surgical services</td>
<td>No. of centres established</td>
<td>2022</td>
</tr>
<tr>
<td>3. Conduct routine monitoring of cataract surgery outcomes</td>
<td>Outcome reports developed</td>
<td>Annual</td>
</tr>
<tr>
<td>4. Develop AND IMPLEMENT ‘EYE CARE’ quality improvement projects</td>
<td>‘Projects developed AND IMPLEMENTED’</td>
<td>Annual</td>
</tr>
</tbody>
</table>

b) Childhood Blindness:

**Strategy:** Strengthen screening and early detection work to ensure that all children have access to comprehensive eye care services by 2022.

This will require reaching an agreement on the most efficient way to screen all new born babies and all school children by the age of 5 years.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conduct school screening programme</td>
<td>a) no. of schools screened b) no. of children screened c) no. of children with visual impairment &amp; no. of children screened receiving prescription glasses d) no. of any other eye conditions found</td>
<td>Annual</td>
</tr>
<tr>
<td>2. Capacitate all PHCW to screen all infants for congenital cataracts and any other eye disease using the WHO early detection instrument.</td>
<td>No. of PHCW sensitized &amp; trained</td>
<td>Continuous</td>
</tr>
<tr>
<td>3. Conduct screening for retinopathy of prematurity (ROP) at MGH &amp; RFM</td>
<td>No. Of ROP cases identified</td>
<td>Continuous</td>
</tr>
<tr>
<td>4. Capacitate ophthalmologists &amp; nurses for paediatric ophthalmology services in the public hospitals</td>
<td>No. of paediatric patients seen</td>
<td>continuous</td>
</tr>
</tbody>
</table>

c) Refractive Error and Low Vision:

This service is currently centralized to urban areas and lacks a dedicated optical workshop
**Strategy:** Sustain and expand the current National Refraction and Low Vision Programme to reduce the burden of uncorrected refractive error by 25% by 2022.

This will require the provision of low cost affordable spectacles to the wider population of Eswatini.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify new suppliers and source cheap quality affordable spectacle lenses and low vision devices.</td>
<td>New suppliers identified</td>
<td>2019</td>
</tr>
<tr>
<td>2. Identify and establish alternative service level agreements for lens fitting laboratories as an interim solution.</td>
<td>Service agreement established</td>
<td>Continuous</td>
</tr>
<tr>
<td>3. Refresher training for optometrists in low vision</td>
<td>No of optometrists trained</td>
<td>2021</td>
</tr>
</tbody>
</table>

**d) Diabetic Retinopathy:**

There is a need to collaborate closely with the Diabetic Association through the Non Communicable Diseases (NCD) programme to improve early detection and management of diabetes in order to reduce end-stage retinopathies by 25% by 2022.

**Strategy:** Establish quality integrated and comprehensive diabetic retinopathy services in Eswatini.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Integrate eye health activities into the work of the NCD Program.</td>
<td>Eye Health Integrated into NCD program</td>
<td>2020</td>
</tr>
<tr>
<td>2. Capacitate technicians to conduct mandatory retinal screening for new diabetic patients in all secondary health facilities.</td>
<td>No of diabetics screened</td>
<td>2020</td>
</tr>
<tr>
<td>3. Ministry of Health to utilize the outcome of the pilot phase at Good Shepherd Hospital to roll out the DRSS program to government facilities and other mission centres.</td>
<td>DRS rolled out in public facilities</td>
<td>2020</td>
</tr>
<tr>
<td>4. Sensitize clinicians on referral patterns of diabetic patients to ophthalmologists</td>
<td>No diabetics referred for eye screening</td>
<td>2019</td>
</tr>
<tr>
<td>5. Train and recruit grader technicians for public hospitals</td>
<td>3 technicians recruited &amp; trained</td>
<td>2020</td>
</tr>
<tr>
<td>6. Develop IEC material for DR</td>
<td>Diabetic retinopathy IEC Material developed</td>
<td>2019</td>
</tr>
</tbody>
</table>
e) **Glaucoma**

**Strategy:** Develop a cost-effective approach to early detection and treatment of glaucoma in the Eswatini population.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establish early detection programme for glaucoma</td>
<td>Program established</td>
<td>2020</td>
</tr>
<tr>
<td>2. Improve availability of medical supplies to reduce stock-outages</td>
<td>No of days out of stock</td>
<td>2019</td>
</tr>
<tr>
<td>3. Develop IEC material for Glaucoma</td>
<td>IEC material for glaucoma developed</td>
<td>2019</td>
</tr>
</tbody>
</table>

f) **HIV/AIDS and TB related Eye Conditions:**

Eswatini still has the highest prevalence of HIV/AIDS and possibly TB. These two conditions impact significantly on visual impairment and blindness.

**Strategy:** Integrate Eye Care Services into HIV/AIDS and TB control programs.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conduct routine vision screening on all patients on TB treatment.</td>
<td>No. of TB patients’ vision screened</td>
<td>Annual</td>
</tr>
<tr>
<td>2. Sensitize HIV Units on early detection and referral of HIV/AIDS patients with ocular conditions</td>
<td>No. of HIV units sensitized</td>
<td>Annual</td>
</tr>
</tbody>
</table>

**g) Sub-specialised eye surgeries: Cornea and Retina**

There is a need to establish a long term solution that will encompass knowledge transfer to local surgeons for corneal and retinal surgeries.

**Strategy:** Increase access to specialized eye surgeries.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conduct a pilot of the feasibility of establishing corneal grafting services at Good Shepherd Hospital and TLC.</td>
<td>Corneal Graft services established in Eswatini</td>
<td>2020</td>
</tr>
<tr>
<td>2. Establish a public-private partnership for subspecialty retinal and corneal surgical services</td>
<td>Partnership established</td>
<td>2020</td>
</tr>
<tr>
<td>3. Training of ophthalmologist on this specialized eye surgery</td>
<td>No. of ophthalmologists trained</td>
<td>continuous</td>
</tr>
</tbody>
</table>
h) Referral Mechanisms

Strategy: Community health care providers, RHMs, cataract case finders and social workers to conduct vision screenings. PEC to be provided at community clinics. All patients recognized as failing a vision screening or having complicated eye disease will be referred to the nearest regional eye hospital.

Establish referral mechanisms with private sectors offering non eye health services in the country.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sensitize RHMs on referral mechanism to front-line health facilities and onwards to specialist eye health services</td>
<td>continuous</td>
</tr>
<tr>
<td>2. Sensitise and create referral mechanisms of eye cases with general private sector medical practitioners.</td>
<td>No. of private practices sensitised 2020</td>
</tr>
</tbody>
</table>

7.3 Human Resource Development

There is a shortage of eye care staff under the MoH mainly brought about by poor staff retention. There is no eye care training plan for eye health workers.

Strategy: Develop and maintain a sustainable eye health workforce to deliver the national eye care plan by 2021.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review and update current job descriptions for eye health workers</td>
<td>Updated job descriptions for all eye health cadres</td>
<td>2019</td>
</tr>
<tr>
<td>2. Develop a national Human Resource for Eye Health (HReH) plan</td>
<td>Availability of national HReH plan</td>
<td>2019</td>
</tr>
<tr>
<td>a) Make an inventory of eye health care workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Request posts for needed eye health workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) List the disciplines needed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Integration of HReH plan into the national HRH plan</td>
<td>HReH plan integrated into national HRH plan</td>
<td>2020</td>
</tr>
<tr>
<td>4. Establish staffing norms for eye health care workers</td>
<td>Staffing norms established</td>
<td>2019</td>
</tr>
<tr>
<td>5. Address the challenge of training and retaining ophthalmic nurses and other eye health workers</td>
<td>Availability of training plan for eye health</td>
<td></td>
</tr>
</tbody>
</table>
6. TRAINING:
   a) Ophthalmic medical officers: GSH accredited to provide training with certification from South African College of Medicine for the Diploma in Ophthalmology
   b) Ophthalmic Nurse: to develop a 1 year diploma course, based at GSH nursing school
   c) Ophthalmic Technician course: Develop a 3 to 4 month course to train for DRS and other clinic technical duties. Verification provided by continuous education using the OSSA certified course.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Build dedicated operating theatre at Mbabane Government Hospital by 2022</td>
<td>Op theatre at MGH built</td>
<td>2022</td>
</tr>
<tr>
<td>2. Establish Optical workshop for Government</td>
<td>Optical W/shop established</td>
<td>2021</td>
</tr>
<tr>
<td>3. Equipping of 3 additional centres offering cataract surgical services</td>
<td>No. of centres established</td>
<td>2022</td>
</tr>
<tr>
<td>4. Establish a Manzini Eye Hospital</td>
<td>Manzini Eye Hospital established</td>
<td>2020</td>
</tr>
</tbody>
</table>

7.4 Infrastructure, equipment and supplies

MGH is the only institution offering eye surgeries within the public sector. There is a need to equip the other 3 regional centres for eye surgery. This will help towards improving accessibility of this service.

Strategy:

a) Infrastructure: Develop/ rehabilitate facilities at all levels and make them more accessible.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Build dedicated operating theatre at Mbabane Government Hospital by 2022</td>
<td>Op theatre at MGH built</td>
<td>2022</td>
</tr>
<tr>
<td>2. Establish Optical workshop for Government</td>
<td>Optical W/shop established</td>
<td>2021</td>
</tr>
<tr>
<td>3. Equipping of 3 additional centres offering cataract surgical services</td>
<td>No. of centres established</td>
<td>2022</td>
</tr>
<tr>
<td>4. Establish a Manzini Eye Hospital</td>
<td>Manzini Eye Hospital established</td>
<td>2020</td>
</tr>
</tbody>
</table>

b) Equipment and supplies: Maintain sufficient and functioning equipment and supplies to meet the needs of the national eye care programme.

The current supply of equipment available in government is old and dysfunctional and only available at one hospital.
There are interrupted supplies of surgical and medical consumables, mainly because of the centralized tendering process

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procure equipment and supplies utilizing the IAPB Standard List</td>
<td>Equip &amp; supplies procured</td>
<td>Continuous</td>
</tr>
<tr>
<td>2. Establish a stable and reliable supply chain for all consumables and drugs (discretionary funds available).</td>
<td>Alternative sources of funds found</td>
<td>Continuous</td>
</tr>
<tr>
<td>4. Procure operating equipment for Hlatikulu, Mankayane and Piggs Peak Government Hospital, i.e. operating microscope, slitlamp, autoclave, cautery machine, surgical instruments, A-scan, auto refractor</td>
<td>3 operating facilities equipped</td>
<td>2020</td>
</tr>
<tr>
<td>5. Procure equipment for MGH</td>
<td>Equipment procured</td>
<td>2019</td>
</tr>
</tbody>
</table>

8. OBJECTIVE 2: TO STRENGTHEN INTEGRATION AND COORDINATION OF EYE CARE SERVICES WITHIN OTHER RELEVANT HEALTH SERVICES AND STAKEHOLDERS.

8.1 Social inclusion

**Strategy:** Strengthen coordination and provision of eye services and ensure that persons with disabilities have universal and equitable access to all public eye health interventions and services.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formation of a multi sectorial eye health committee with clear terms of reference</td>
<td>Committee established and fully operational</td>
</tr>
<tr>
<td>a. Conduct Quarterly meetings for TWG (Technical working group)</td>
<td>Availability of reports of meetings undertaken</td>
</tr>
<tr>
<td>b. Establishment of clear structures for provision of eye care at regional and national level</td>
<td>Established operational structures for eye care at national &amp; regional level, fully operational</td>
</tr>
<tr>
<td>2. Conduct community based awareness campaigns e.g.</td>
<td>No. of campaigns conducted</td>
</tr>
<tr>
<td>World albinism day, world sight day, World cane day, United Nations International day for persons with disabilities, World retina day etc.</td>
<td>No. of policy makers, communities and traditional leaders sensitised</td>
</tr>
</tbody>
</table>
3. Create dialogues with persons living with disabilities due to visual impairment

No. of media platforms utilized
No. of individuals from Eswatini Association of visual impaired persons and relevant institutions involved.

Annual

4. Develop and disseminate Information, Education and communicating material (IEC) e.g Braille

No. of Eswatini Ass. of Visually Impaired Persons, stakeholders and relevant intuitions trained.
No. of IEC materials developed

2019

5. Advocate for health facility buildings that are safe and accessible for visual impaired and blind.

No. of hospitals and health centres providing outreaches/ community based programmes

Annual

6. Develop strong collaborative referral systems with relevant stakeholders e.g. Diabetic/BP clinics, TB centres, HIV/AIDS clinics or centres, regional hospitals and rural clinics, private front line optometrists etc.

Collaboration strengthened through NCD and other MoH programmes.
Community based Rehabilitation strengthened through the RHM’s programs.
functional tools developed for referral between relevant stakeholders

2020

8.2 Special Education Needs (Inclusive education)

Strategy: To ensure that all persons with visual disabilities, irrespective of gender, nature or severity of the disability, have equal access to meaningful, age-appropriate early childhood, primary, secondary and higher education.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicators</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advocate for accessible school environment to cater for learners with visual impairment</td>
<td>Proportion of schools providing accessible environment for educational needs for visually impaired learners. Proportion of teachers qualified in special education. No. of special needs learners identified and referred for early treatment and management. No. of learners, educators and school community sensitized. Proportion of school health teams and RHMs trained.</td>
<td>2022</td>
</tr>
</tbody>
</table>
Capacitate teachers on early identification and referral of children with visual impairment. | No. of leaners and teachers provided with special education of equipment and learning material | No. of learning institutions implementing strategies on early identification on children with special needs | 2022

Advocate for human resource and equipment for screening purposes | Budget line established for eye care services | Number of hospitals, health centres and outreach programmes fully furnished with eye care appropriate equipment | 2022

### 9. OBJECTIVE 3: TO IMPROVE INTER-SECTORAL COLLABORATION WITH OTHER SECTORS

The vision, mission and principals of this plan require that active steps are taken by the eye care programme to support the objectives of the National Disability Action Plan and the National Education Plan. The relevant sections are as follows.

#### 9.1 Governance and Leadership

There is no post for the NECC nor is there an official committee to oversee the implementation of the National Eye Care Plan.

**Strategy:** Develop an inclusive multi-sectoral national eye health committee with a full time NECC in place by 2019.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Draft TOR’s for NECC and the committee</td>
<td>TORs for NECC AND Committee drafted</td>
<td>2019</td>
</tr>
<tr>
<td>a) TWG to define the key stakeholders to be invited e.g. MOH, MoET, DPMO, MTAD, Private sector, mission(RFM, GSH), TLC, NCD program, CBM, UNICEF, WHO, SAVIP, FODSWA</td>
<td>TORs for NECC AND Committee drafted</td>
<td>2019</td>
</tr>
<tr>
<td>b) Invite the stakeholders through PS office to be members of the NEC committee.</td>
<td>NECC committee established</td>
<td>2019</td>
</tr>
<tr>
<td>2. DD-Clinical to advocate for creation of NECC post</td>
<td>Post created</td>
<td>2019</td>
</tr>
<tr>
<td>a) Submit the TORs to DD-Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Submit NECP Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Minute to PS.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9.2 Financing eye health services

There is no budget-line for Eye Care Services through the Ministry of Health consequently delivery of this service is often interrupted by stock outages of surgical and medical supplies.

**Strategy:** Mobilise adequate resources to deliver the National Eye Health strategy by 2021.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop a National Eye Health strategic plan with budget</td>
<td>National eye health strategic budget plan developed</td>
<td>2019</td>
</tr>
<tr>
<td>1.1 Convene meeting between TWG and MoH-planning to cost activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Secure a centre number for the NECP</td>
<td>National Eye care centre available</td>
<td>2019</td>
</tr>
<tr>
<td>a) NECC to submit concept note to PS</td>
<td>National Eye care centre available</td>
<td>2019</td>
</tr>
<tr>
<td>b) PS to submit minute to DD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Resource Mobilisation</td>
<td>Resource mobilization strategy available</td>
<td>continuous</td>
</tr>
<tr>
<td>a) Identify opportunities for PPP’s for eye health.</td>
<td>Proposals developed</td>
<td>2019</td>
</tr>
<tr>
<td>b) Develop and pitch proposals to potential partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Develop an annual eye budget for equipment and consumables</td>
<td>Eye care program budget developed</td>
<td>Annual</td>
</tr>
</tbody>
</table>

10. MONITORING AND EVALUATION

There is no centralized formal system of evaluation or monitoring of eye clinics by the Ministry of Health. Records in the government system are recorded on paper and the diagnosis is recorded in a hospital record book. Mission Eye Clinics use an electronic database that keeps track of patient demographics as well as diagnosis, treatment and surgical outcomes based on WHO guidelines.

For effective management, the Eye Care Program requires a common database across all clinics and an agreed set of indicators to collect essential data such as: diagnosis, treatment, surgical procedures and postoperative outcomes, staffing, equipment, supplies.
### 10.1 Monitoring and Evaluation

**Strategy:** Strengthen monitoring and evaluation system for the National Eye Care Plan.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Indicator</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop a tool of indicators to monitor implementation of the Eye Care program</td>
<td>Indicators developed</td>
<td>Annual</td>
</tr>
<tr>
<td>2. Develop co-ordination mechanisms with the WHO country office for monitoring and evaluation purposes.</td>
<td>Co-ordination mechanism established</td>
<td>2019</td>
</tr>
<tr>
<td>3. Upgrade and standardize data collection tools</td>
<td>Standard data collection tool for eye care developed</td>
<td>2020</td>
</tr>
<tr>
<td>4. Procure ICT equipment for monitoring and evaluation</td>
<td>ICT equipment procured</td>
<td>2020</td>
</tr>
</tbody>
</table>
Appendix I
National Eye Care Program Organization

Deputy Director – Clinical Health Services

NCD Program Co-ordinator
NEC committee

NECP Coordinator

Regional E.C.C Manager
Government Facilities Focal Person
Heads of Dept of Mission Facilities Focal Person
Implementing Partners & Stakeholders Focal Person

Hhohho Manzini Lubombo Shiselweni
Mbabane Piggs Peak Hlatikulu Mankayane
Good Shepherd Raleigh Fitkin The Luke Commission
Eswatini Lions Club, NAVIPS, MoET, MoTAD, Disability Unit, PeaceCorp

Regional Health Administrator
Primary Health Care Workers
Rural Health Motivators
Appendix II

Organizational Schematic of Decentralized Care

**Community Health Workers** – also known as Rural Health Motivators are a part of the public health delivery system of Eswatini. It is their responsibility to understand the health needs of their community and promote health care within the community.

**Primary Health Care Facilities** – are the first point of care for most Swazis. There are 234 clinics spread throughout the country and are primarily run by primary care nurses. Nurses in these clinics will participate in a Primary Eye Care Training Program giving them the knowledge and skills to care for basic eye care needs. A sufficient number of nurses will be trained to provide a ratio of 1 eye care provider per 50,000 population. It is the goal of the National Eye Care Programme to eventually provide optometric care at this level.

**Regional Referral Centres** – Each regional hospital has a fully equipped eye clinic that provides comprehensive eye care. The hospital also provides inpatient services if needed. Each regional centre will house ophthalmology services as well as optometric and eventually surgical services.

**National Eye Referral Centres (NERC)** – Will serve as referral centres for all higher levels of eye care. Patients with complicated medical and surgical ophthalmic needs will be transferred to the National Eye Referral Centres. These centres will house subspecialty care and provide inpatient services.