



VISION 2020 Programme Evaluation

The Pono Letlotlo Eye Project

Final Report



October 2016
Author: Deon Minnies



**Addenbrooke's
Abroad**
Cambridge University Hospitals

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Chartered**
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KEY ACRONYMS AND ABBREVIATIONS

UCT-CEHI – University of Cape Town Community Eye Health Institute

IAPB – International Agency for the Prevention of Blindness

VISION 2020- An initiative aimed at eliminating avoidable blindness by the year 2020

RAAB – Rapid Assessment of Avoidable Blindness (survey)

CSR – Cataract Surgical Rate (number of cataract operations per million population per year)

MoH – Botswana Ministry of Health

NPEC – (Draft) National Plan for Eye Care 2015-2019

NECP – National Eye Care Programme

NEHC – The National Eye Health Committee, a structure of the Ministry of Health

NEPM – National Eye Programme manager / management in the Ministry of Health

V2020 Links Programme – An IAPB initiative linking UK based training institutions with overseas partner institutions (mainly in Africa) to transfer skills and resources for development of eye care services.

IPMS – Integrated patient management system

SMART objectives – Objectives that are specific, measurable, achievable, realistic and time-bound

Disclaimer:

This publication was produced at the request of Addenbrooke’s Abroad. It was prepared by the Community Eye Health Institute, University of Cape Town. The views expressed in this report are those of the authors and do not necessarily reflect the position of Addenbrooke’s Abroad, Pono Letlotlo or the Botswana Ministry of Health or any of its structures. Nor do these entities accept any liability for claims arising from the report’s content or reliance on it.

PLEASE NOTE: Throughout the report, the Pono Letlotlo Eye project and its components are referred to as “Pono Letlotlo Eye project”, “Pono Letlotlo”, or “the (eye) project” in keeping with the context.

ALSO: In context, the “funder” refers to Standard Chartered Bank and the “partner” refers to the Ministry of Health of Botswana.

Community Eye Health Institute, Division of Ophthalmology, Faculty of Health Sciences, University of Cape Town
H53 Old Main Building, Groote Schuur Hospital, OBSERVATORY, 7785, Republic of South Africa
Private Bag 3, RONDEBOSCH 7700, Republic of South Africa
Tel (+27) 21-406 6215 / (+27) 21-406 6039 Fax (+27)21-406 6621,
Email cehi@uct.ac.za Website: www.cehi.uct.ac.za, www.uct.ac.za

1. EXECUTIVE SUMMARY

In September 2016, the Community Eye Health Institute of the University of Cape Town conducted an evaluation to determine how successful the Pono Letlotlo project has been in improving services to prevent blindness in Botswana and describe the broad impact of the project for future prospects of investment and development.

The Pono Letlotlo Eye project started in 2013, and continued after its scheduled end (April 2016) to implement some of the incomplete activities of the project. The project supports the Ministry of Health to improve services to prevent blindness and visual impairment in Botswana. The project is an integral part of the national eye care strategy, concentrating efforts on diabetic retinopathy, refractive error and child vision services, along with leadership development. The project is facilitated by Addenbrooke's Abroad, a charitable programme based at Cambridge University Hospitals, which has a long standing health partnership with the MoH, that includes a VISION2020 Link that has received funding from Standard Chartered Bank's *Seeing is Believing* campaign.

The key stakeholders of Pono Letlotlo project eye project include the Ministry of Health, the public sector providers of eye care services, the private sector providers of eye care services, partners of the government eye care services, e.g. Addenbrooke's Abroad and the beneficiaries of the project, mainly public service users of eye care services.

Geographically, the project covers the entire country, targeting mainly the poor, young children, older people and those with diabetes. The Child Vision Services (CVS) are most widely distributed. The CVS element involves innovative engagement of health assistants and teachers as case-finders, who had been trained in understanding of, detection and referral for management of sight-threatening conditions in early primary school children. The Diabetic Retinopathy Screening (DRS) services, while drawing from all over the country, operate from fixed fundus screening centres in Gaborone, Serowe, Francistown and Maun. A special Vision Centre is situated at Sekgoma Memorial Hospital in Serowe, providing Refractive Error Services (RES). The Leadership development activities were mainly aimed at the National Eye Health Committee, but also included training for technical and support staff.

The evaluation team used the Centers for Disease Control's Framework for Programme Evaluation and covered the areas of assessment of the impact of the project, identification of lessons learned, appraisal of the national Plan for Eye Care and assessment of the capacity of the Ministry of Health Evaluation to facilitate and support future endeavours for eye care improvement.

The project succeeded in achieving many of the targets set, including completing of training targets, establishment of new service and improvement of existing services. The impact of these include increase in access to quality eye care services for a greater demographic and geographic beneficiary pool, as well as broadening the scope of service availability to the public service users of Botswana. The project also generated a contingent of highly trained and motivated eye care staff, capable of driving the agenda of improving eye care services much further in the time ahead.

The project underperformed with regards to some services delivery targets set, primarily due to challenges in the National Eye Care Programme. These challenges include poorly capacitated National Eye Care Programme office, lack of activity of the National Eye Health Committee, local project management deficiencies and unsuitable strategies relating to staff deployment, recruitment and performance management, procurement of supplies and monitoring and reporting systems.

The Pono Letlotlo project (and this evaluation) identified many strengths in the architecture of the partner, the Ministry of Health, which include political will from senior Ministry of Health officials, teamwork, abilities to integrate services and a highly dynamic ophthalmic nurse cadre. There is also a good number of ophthalmologists, although many on short-term contracts.

However, there are many weaknesses including human resource, stakeholder and financial / resource management and reporting challenges making it difficult to achieve lasting gains without dealing with these conclusively. At this stage the capacity to deal with some of these issues are lacking. There are very real threats of staff attrition, cultivated dependency and complacency, skills erosion (which can happen if the project activities are not sustained), and most importantly, funding dry out. Managing these threats and grasping the opportunities are key tasks for a competent and committed leader in eye care to focus on.

We strongly recommend that the project goal of improving services to prevent blindness in Botswana be pursued with greater vigour and determination by the Ministry of Health and Addenbrooke's Abroad, an organisation that now has an almost decade-long relationship with the Botswana Ministry of Health. This may require that they (Addenbrooke's Abroad) continue to avail their expertise in project administration, resource mobilization and advocacy to the Ministry of Health, in addition to their vast resource of technical expertise and links with even more resources.

We further recommend the Ministry of Health undertakes to fully capacitate the National Eye Health Programme office, including but not limited to: providing administrative support, equip with necessary work resources (telephone, transport), establishing a mentorship programme to develop the leadership and management skills necessary to implement a robust national eye care plan, and revise the organogramme to better support the NEHP office staff through supervision, performance management and more effective line function.

We list a number of further recommendations for improvement at programme level, including:

- Completing and marketing the National Plan for Eye Care;
- Re-activating the National Eye Health Committee;
- Attracting more local eye care professionals to senior positions in the Ministry of Health;
- Strengthening stakeholder relations; and
- Developing advocacy strategies for eye care improvement.

For improvement at project level, we recommend that "project" teams be upskilled in monitoring and evaluation, advocacy, stakeholder management, and given full authority to make decisions about project deliverables to ensure better outcomes when implementing projects in the National Eye Care Programme.

We provide further suggestions to consider for restructuring selected eye care services, for developing project management capacity, for managing stakeholders and for improvement of the National Plan for Eye Care.

The Pono Letlotlo Project has been effective in improving services to prevent blindness in Botswana. It can also be said to have been very relevant in that it is aligned with the objectives of the National Plan for Eye Care 2015-2019, and responsive to the emerging needs for eye care. The broad impact of the project is improved access, establishment of services and trained eye care workers, laying a good foundation for future prospects of investment and development. Still, more advocacy is required to mobilise internal resources for future sustainability of eye care services in Botswana.

2. INTRODUCTION

Pono Letlotlo “*Improving Services to Prevent Blindness in Botswana*” is a 3 year project funded by Standard Chartered Bank’s *Seeing is Believing (phase V)* campaign which started in February 2013 in Botswana. The project supports the Ministry of Health to improve services to prevent blindness and visual impairment in Botswana amongst people with diabetes, children and those with refractive error as part of the VISION 2020 strategy to eliminate avoidable blindness.

Phase V of the *Seeing is Believing* campaign (a joint initiative of the International Agency for the Prevention of Blindness and Standard Chartered Bank) was announced in November 2011.

Addenbrooke’s Abroad, a charitable trust based at Cambridge University Hospital in the United Kingdom is in partnership with the Botswana Ministry of Health, responsible for implementing the *Seeing is Believing* grant. Addenbrooke’s Abroad provides expert training, advice and support to ophthalmic staff by using short and long term technical advisors. The project has funded training for identified staff in various eye care competencies and assisted with infrastructural development for eye care by providing equipment and supplies at project facilities.

The project objectives were:

- To establish effective leadership and management mechanisms including commitments by Ministry of Health for new and improved eye services in the public sector focusing on diabetics, children and those with refractive error.
- To increase and improve provision of Diabetic Retinopathy screening and treatment services in Botswana
- To establish a national programme for assessment of child eye health in Botswana
- To increase and improve optometric services in the public sector in Botswana and build referral pathways for patients with refractive error

The expected outcomes were:

- 33% (18,000) of diabetics added to Diabetic Retinopathy Screening register and screened
- 50% (27,000) of diabetics have access to screening and treatment for DR
- An increase of 60% of children treated for sight threatening conditions
- An increase of 60% in the number of eye examinations and number of spectacles prescribed within the public sector
- Contribution to the National Plan for Prevention of Blindness

To date, the project has not reported satisfactorily against the targets set, mainly because of reporting difficulties. The project is currently in a 6 months (no cost) extension phase which ended in September 2016.

There is a need for an end-of-project evaluation to determine:

- How successful has the project been in improving services to prevent blindness in Botswana?
- What is the broad impact of the project for future prospects of investment and development?
- What lessons have been learned that can be applied for greater effect in this and similar projects under the *Seeing is Believing* campaign?
- How can the achievements of the project be capitalised on and the challenges experienced be overcome?

In essence, the evaluation should map a way forward for engagement with the key stakeholders towards improvement of eye care services in Botswana.

As part of the project plan, an external evaluation was undertaken of the Pono Letlotlo *Improving Services to Prevent Blindness in Botswana* project by the University of Cape Town's Community Eye Health Institute (UCT-CEHI), as a strategic initiative facilitated by Addenbrooke's Abroad through funding from Standard Chartered Bank's *Seeing is Believing* campaign.

OBJECTIVES AND SCOPE OF THE EVALUATION

The evaluation will cover the following broad areas of investigation and analysis:

- a. Assessment of the impact of the project activities, comparing programmatic targets with results achieved over the period 2013 to 2016;
- b. Identification and elaboration of lessons learned and their relevance and usefulness to apply in future endeavours of the partnership and beyond;
- c. Appraisal of the National Plan for Eye Care 2015-2019 in the context of i) the need identified ii) the interventions proposed and iii) demonstrated capacities to increase volume and quality of the outputs proposed, given the strength and weaknesses of the partner;
- d. Assessment of the partner's capacity to facilitate and support future strategies for improvement of eye care services and ensuring effectiveness and efficiency;
- e. Synthesis of recommendations for improving management and leadership in eye care, establishment of a system for monitoring and evaluation of projects, and strategies for risk management and quality control.

TERMS OF REFERENCE

- The University of Cape Town's Community Eye Health Institute (UCT-CEHI), was contracted to conduct an evaluation based on the above-mentioned objectives.
- The evaluation was to take place during a period of 20 working days starting from 1 August to 15 October 2016, involving document reviews, stakeholder interviews and observation of practices and procedures, activities and events of the project.
- A final electronic report (in English) would be the principal output of the evaluation. The report would concisely present findings with relation to the terms of reference to be agreed upon.
- Responsibilities regarding oversight of the evaluation, facilitation of data collection, commenting on draft report and distribution of the final report will be shared amongst the project partners (Ministry of Health, Addenbrooke's Abroad and Standard Chartered Bank)
- UCT-CEHI will be responsible for design and structure of the evaluation process, developing / customization of data collection and analysis tools, data collection, data analysis and production of reports.
- Cost of the evaluation, including the consultancy fee will be paid to UCT-CEHI, as per agreed budget proposition.

TEAM

The primary team responsible for the evaluation are:

- Mr Deon Minnies, Director: Community Eye Health Institute and
- Prof Colin Cook, Head of Ophthalmology.

Both from the University of Cape Town, South Africa.

The University of Cape Town's Community Eye Health Institute (UCT-CEHI) has been developing management capacity in sub-Saharan African blindness prevention programmes since its establishment in 2008. This is done in support of the goals of the VISION 2020, an initiative aimed at eliminating avoidable blindness by the year 2020.

Through educational programmes, training workshops and consultancies, UCT-CEHI has provided much needed programme management training and development support to eye care programmes in developing countries. We have recently added RAAB survey facilitation and strategic planning for eye care to our portfolio of services.

WORK PLAN

Period	Phase	Remarks
01 Aug – 31 Aug	Inception phase	Proposal finalised
		Terms of reference concluded
05 Sep – 06 Sep	Preparation phase (2 work days)	Documents review
		Scheduling of field work
07 Sep – 16 Sep	Data collection phase (8 work days)	Interviews
		Observations
		Documents review
		Preliminary feedback
19 Sep – 23 Sep	Data analysis phase (5 work days)	Data analysis
		Documents review
26 Sep – 30 Sep	Reporting phase (5 work days)	Draft final report
		Stakeholder feedback
01 Oct – 15 Oct		Final report Administrative conclusion

Key roles and responsibilities in the evaluation:

- Addenbrooke's Abroad: oversight of the evaluation; facilitation of data collection including document retrieval, commenting on provisional report, review of draft report; authorisation of expenditure, coordination of funding and agreements.
- Botswana Ministry of Health: facilitation of data collection including document retrieval, commenting on provisional report, review of draft report; authorisation of expenditure, coordination of funding and agreements.
- UCT-CEHI: design and structure of the evaluation process; developing / customization of data collection and analysis tools, data collection, data analysis and production of reports.

3. BACKGROUND

Botswana is a landlocked country in Southern Africa, bordered by South Africa, Namibia, Zambia and Zimbabwe. The country stretches over 2000 km from north to south and covers a total surface area of 582 000km², which is approximately the size of a country like France. The country features two unique geographical landmarks namely the Kgalagadi Desert and the Okavango Delta. It is also home to one of the world's oldest indigenous people, the San.



The population is approximately 2.1 million, with greater concentration in the eastern part of the country. The people of Botswana are known as Batswana and comprise a number of different ethnic groups. There are also people of Asian and European descent, and those of mixed ancestry.

Gaborone is the capital, with just over 25 000 population, situated close to the border with South Africa on the south east. Other centres include Francistown, Molepolole, Lobatse, Kanye and Maun. Situated close to the subtropical high pressure belt of the southern hemisphere, Botswana has a dry, semi-arid climate.

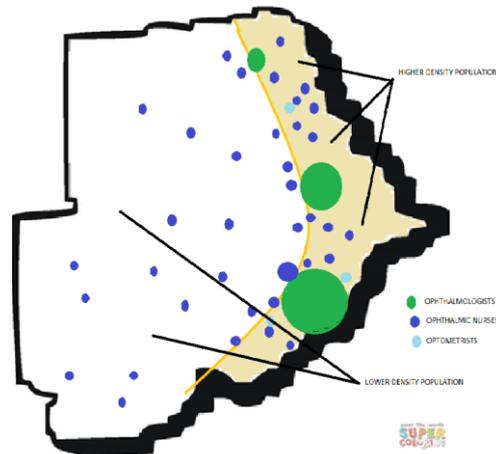
Botswana is classified as an upper middle income country, thanks to the world's biggest diamond mining industry. In 2015, the Government allocated 15.5% of its budget to health care (above African region average), up from 6.9% (below African region average) in 2000. As in other countries in the Southern African Development Community (SADC) region, the burden of non-communicable diseases is rising in Botswana with inadequate capacity to deal with the problem.

Health services are delivered based on the primary health care approach, making use of 3 referral hospitals, 12 district hospital, 17 primary health care facilities, 277 clinics and 338 health posts, operating in an equitably distributed network throughout the country. Princess Marina Hospital in Gaborone is the national centre of excellence for a variety of sub-specialist medical services. There are reference centres based at referral hospitals in Francistown, Molepolole, Serowe, Mahalapye

Lobatse and Maun covering a wide spectrum of specialist conditions. There are a number of industry and mining services hospitals that provide services for the work force and their families in these sectors, as well as private hospitals. Health professional education occurs at the Institute of Health Sciences and a medical school attached to the University of Botswana.

DISTRIBUTION OF HEALTH FACILITIES & HUMAN RESOURCES

- In 2011, the health worker to population ratios were: 3.4 per 100000 for physicians (African regional average 2.3) and 28.4 per 100000 for nurses and midwives (10.9).
- Ophthalmologists, ophthalmic nurses and optometrists are the main cadres responsible for providing eye care services.
- Ophthalmologists are based at hospitals mainly in the more densely populated eastern part of the country (see map alongside), while ophthalmic nurses perform their duties throughout the country, sometimes through outreach.



BURDEN OF BLINDNESS

According to the 2014 RAAB survey (Rapid Assessment of Avoidable Blindness), there are an estimated 50 000 visually impaired people (Visual Acuity less than 6/18 better eye) in Botswana of which approximately 15 000 are blind (Visual Acuity less than 3/60 better eye).

The main causes of blindness and visual impairment are:

Blindness: cataract 41%, glaucoma 23%, corneal scar 14%

Visual impairment: refractive error 53%, cataract 32%, corneal scar 4%

The Ministry of Health provides eye care services to the majority of the population, making use of 3 surgical centres and comprehensive eye care services delivered throughout the country. Cataract services in these centres are supplemented with surgical outreach camps. In 2014, the cataract surgical rate was 1200. At the time of this report, there were 12 ophthalmologists, 65 ophthalmic nurses and 3 optometrists working in eye care in the government sector. The majority of ophthalmologists are expatriates, or working under short-term contracts.

THE NATIONAL EYE HEALTH PLAN 2015-2019

The Ministry of Health convened a workshop in March 2015 with key eye care stakeholders and with facilitation provided by international experts in eye care, to develop a new 5 year plan for eye care. The resulting draft plan describes the strategy to reduce blindness and visual impairment by at least 25% from 2014 levels. To date, it is still in “draft” format and has not been officially launched.

THE PONO LETLOTLO PROJECT

The Pono Letlotlo project is an integral part of the national eye care strategy, concentrating efforts on diabetic retinopathy, refractive error and child vision services, along with leadership development.

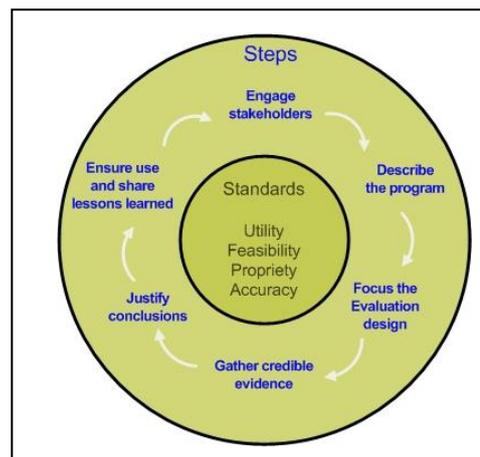
4. EVALUATION METHODS

In September 2016, the Community Eye Health Institute of the University of Cape Town conducted an evaluation to determine how successful the project has been in improving services to prevent blindness in Botswana and describe the broad impact of the project for future prospects of investment and development.

The evaluation used the Centers for Disease Control's *Framework for Programme Evaluation*, a practical, non-prescriptive tool which organises key steps to take and standards to meet for effective evaluation, namely:

1. engage the stakeholders
2. describe the programme
3. focus the evaluation design
4. gather credible evidence
5. justify the conclusions
6. ensure use and share lessons learned

The standards of utility, feasibility, propriety and accuracy can be tested through feedback from the project team. See appendix.



The following issues were investigated:

- the quantity and quality of services provided by the project
- the effectiveness, efficiency and responsiveness of the project
- the impact on eye care in the broader context of collaboration with Addenbrooke's Abroad
- the partner's capacity to deliver in the future projects
- the overall feasibility of the National Plan for Eye Care 2015-2019
- the lessons learnt that can be applied in the future

Before the start of the investigation, a Terms of Reference was agreed upon by all parties, making specific reference to evaluation objectives, data collection activities, field work schedule and key deliverables required.

EVALUATION STRATEGY

The evaluation strategy involved three key activities:

- Desk review of project documentation (reports, statistics and other relevant materials) as well as VISION 2020 program guidelines, policy documents and national and regional strategy documents;
- Identification of and interviews and discussions with stakeholders to gain knowledge and to ensure ownership of the evaluation and its outcomes;
- Observation of practices and procedures, activities and events for verification of reports.

FIELD VISITS AND INTERVIEWS

The field work took place from 7 to 15 September 2016, according to the schedule below:

Mon 5 Sep	Tue 6 Sep	Wed 7 Sep	Thu 8 Sep	Fri 9 Sep
	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Ministry of Health Eye Programme, Gaborone 	<ul style="list-style-type: none"> Scottish Livingstone Hospital, Molepolole, Institute of Health Sciences, Molepolole Education Support Services, Ministry of Education, Kanye 	<ul style="list-style-type: none"> Chief Health Officer, Public Health Dept. Deputy Permanent Secretary, Public Health Dept. Block 6, Diabetic Centre, Gaborone
Mon 12 Sep	Tue 13 Sep	Wed 14 Sep	Thu 15 Sep	Fri 16 Sep
<ul style="list-style-type: none"> Deputy Hospital Superintendent, NRH, Francistown Diabetic Centre, Donga Clinic, NRH, Francistown 	<ul style="list-style-type: none"> Eye clinic and optometry services, NRH, Francistown Centre of Excellence, SMH, Serowe 	<ul style="list-style-type: none"> Child Vision Services Training, Serowe Child Vision Services, SMH, Serowe Head, District Health management Team, Serowe 	<ul style="list-style-type: none"> Acting Deputy Director Clinical Services, Ministry of Health Central Resource Centre, Ministry of Education, Tlokweg Private optometrist, National Eye Health Committee / BOA member 	<ul style="list-style-type: none"> Standard Chartered Bank Seeing is Believing representatives, Gaborone Preliminary feedback meeting, Gaborone

We were happy with the activities completed, which were kindly facilitated and organised by the National Eye Care Programme office. Positive aspects of the field visit included:

- Ministry of Health provided transport and approval to visit facilities
- Ministry of Health Eye Programme office very helpful, despite busy schedule
- Ministries of Health and Education and Social Development officers sacrificing time to meet me
- People generally friendly and accommodating
- Interviewees eager to share views and experiences
- Most “external” stakeholders gave warm reception

There were few negative factors and were mainly related to unpreparedness for the evaluation visit. A degree of low interest in the project was noticed in some officers who were not directly involved.

Data describing the volume and quality of services were obtained from statistics and reports produced as well as interviews with relevant staff. A set of specific interview questions were fielded, aimed at obtaining understanding of the key issues from multiple perspectives. Some specific data sets were requested and studied. Particular attention was given to procedures of record keeping and use of the information produced.

We considered the inherent capabilities of the eye care team, the infrastructure available to them and the supporting facilities of the hospital, combined with the track record of the service over time to assess the capacity to continue delivering on the VISION 2020 mission as embodied in the Draft National Plan for Eye Care. This, together with a detailed SWOT analysis assisted us to have an objective assessment of the capacity of the National Eye Care programme to develop and implement eye care services in collaboration with international partners in the future.

The current structure of the eye service and its suitability for future success was assessed mainly by review of documents pertaining to plans, strategies and reports of project monitoring over the last three years or so. Our view was further expanded by external stakeholders’ and health service officers’ responses to a set of broad questions asked during interviews (list below).

ASPECT	Guiding questions
Stakeholder engagement	Who are the stakeholders of the project? How are the stakeholders involved in the project?
Programme description	What is the structure and function of the project? What is the aim and purpose of the project? What have the project achieved over the last 4 years? What have been the main challenges the project has faced? What resources have been available to overcome the challenges? What is the partner's strengths and weaknesses?
Current project issues	Have the project aims and objectives been met? (EFFECTIVENESS) Have the benefits exceeded the costs incurred so far? (EFFICIENCY) Is there an improvement in access to and quality of services for the target population? (RESPONSIVENESS) What has been the effect of the project in the community it serves? (IMPACT) How is the project contributing to the aims and objectives of the NSECP? (RELEVANCE)
Strategy and sustainability	What is the capacity of the partner? How can leadership and management be improved? What risk management strategies should be implemented? How should an effective monitoring system be established? What is the partner's future plans to improve eye care services? How can lessons learned be applied in the future?

The main assumption made in arriving at conclusions is that the information sources used in the evaluation were reliable and truthful and were presented in the best possible format and structure for analysis and interpretation. We also assumed that the training curricula were relevant, delivered competently and that the expected training outcomes were achieved.

We used the following hierarchy of evidence to interpret our findings:

- Independent evidence carried more weight than
 - Monitoring records obtained from the project, which carried more weight than
 - Formal reports obtained about the project, carrying more weight than
 - Minutes of meetings and formal notices, carrying more weight than
 - Responses to questions, carrying more weight than
 - Comments and opinions, confirmed and verified where possible.

Justification for our recommendations are based on accepted standards and recommendations contained in policy documents of VISION 2020, WHO, *Seeing is Believing*, Botswana Ministry of Health, the Pono Letlotlo project plan and reports.

LIMITATIONS

The data collection was very well facilitated throughout all the phases, with little restriction. However, the main limitations that can impact on the findings are:

- Failure to meet all relevant Ministry of Health representatives as key stakeholders to fully understand Pono Letlotlo project's role in eye care service delivery in Botswana from a government perspective;
- Low exposure to past or current service users from the general population, making assessment of service accessibility / uptake issues for the target beneficiaries difficult;
- Insufficient information to make efficiency assessment from a financial economy perspective of the project.

However, the above-mentioned limitations did not constrain us from collecting sufficient information to answer the evaluation questions.

5. FINDINGS AND ANALYSIS

A. THE PONO LETLOTLO PROJECT

The Pono Letlotlo “*Improving Services to Prevent Blindness in Botswana*” is a 3 year project which started in February 2013 in Botswana. The project supports the Ministry of Health to improve services to prevent blindness and visual impairment in Botswana amongst diabetics, children and those with refractive error as part of the National Plan for Eye Care 2015-2019.

In 2009, Addenbrooke’s Abroad started working in Botswana, assisting the Ministry of Health to implement diabetic retinopathy services through the VISION 2020 Links programme funded by Standard Chartered Bank’s *Seeing is Believing* initiative. In 2011, the proposal for the Pono Letlotlo project was developed in consultation with the Ministry of Health. The planning plan was based on the results of the 2006 RAAB survey, the National Plan for Eye Care (2007-2011) and the outcomes and learnings from the VISION 2020 Links programme from 2009 to 2012.

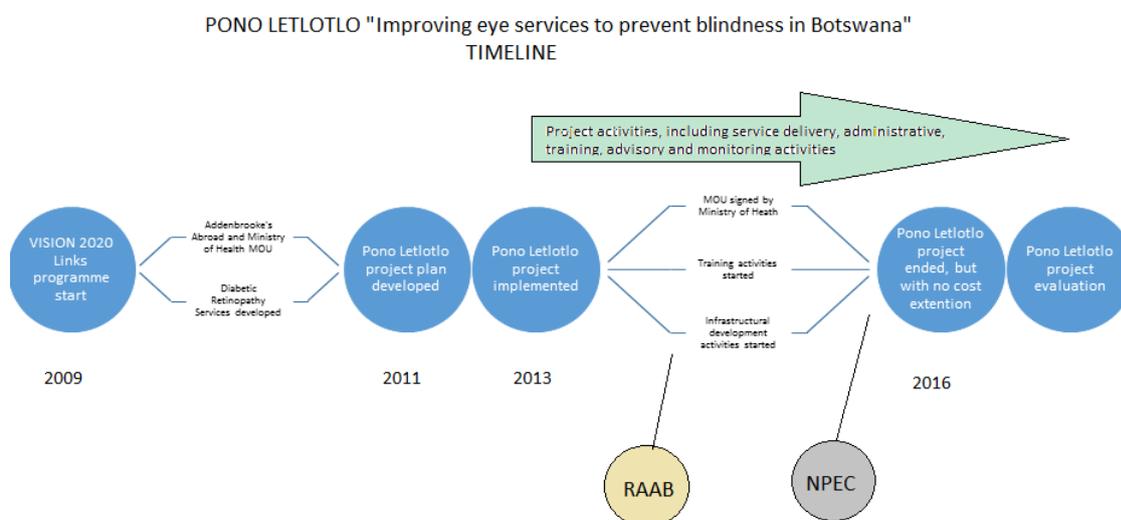
The project has four key components:

- Diabetic retinopathy screening and treatment services;
- Child vision services to identify and refer children with sight threatening conditions;
- Refractive error service; and
- Strategies to develop effective leadership

The table lists the key service delivery targets set.

Activity	DR Laser treatment	School children screening	Diabetic screening	Pre-school children screening	Refraction adults	Refraction children	Spectacles adults	Spectacles children
Target	102	50000	18000	50000	3010	490	1540	385

The project commenced implementation following successful grant application from Standard Chartered Bank’s *Seeing is Believing (Phase V)* initiative. This is a timeline for the project.



Geographically, the project covers the entire country, with resources for Child Vision Services (CVS) most widely distributed. The CVS element involves innovative engagement of health assistants and teachers as case-finders, who were trained in understanding of, detection and referral for management of sight-threatening conditions in early primary school children. The Diabetic Retinopathy Screening (DRS) services, while drawing from all over the country, operate from fixed fundus screening centres in Gaborone, Serowe, Francistown and Maun. A special Vision Centre was established at Sekgoma Memorial Hospital in Serowe where the Refractive Error Services (RES) are based. The Leadership development activities are mainly centred around the National Eye Health Committee, but also included training for technical and support staff.

The project involved most of the health facilities in the country, most of the ophthalmic nursing staff and a large proportion of the rest of the health care staff working in government facilities. Some private optometrists and ophthalmologists have also participated in the project.

PROJECT PERFORMANCE

As at September 2015, the project experienced a mixture of successes and failures. Most of the training targets were met, and some exceeded, while most of the clinical service targets were not met. The project was extended until 2016 to complete some of the activities. The optometric services started very well after establishment of the Vision Centre, but slowed down significantly when the optometrist left the service in 2015. To date, the vacancy has not yet been filled.

Output type	Total target	Total actual	Variance %
General medical interventions (paediatric)	240	1 037	332%
Diabetic retina exam/photo (referral from screening)	2 700	461	-83%
Diabetic treatment (i.e. laser)	66	328	397%
Case finding screening (school children)	25 000	4 152	-83%
Diabetic screening	13 500	6 861	-49%
Case finding screening (pre-school children) ¹	25 000		-100%
Refractions/ prescriptions (adults)	3 652	1 486	-59%
Refractions/ prescriptions (children)	598	321	-46%
Spectacles supplied (adult)	1 860	1 382	-26%
Spectacles supplied (children)	478	277	-42%
DRS Leads	2	4	100%
Ophthalmologists (DR laser)	2	15	650%
Ophthalmic assistant/nurses	36	44	22%
Equipment technicians	6	7	17%
Trained trainers	12	15	25%
Vision Technicians/ Refractionists	2	2	0%
PHC Workers trained in eye care ²	300	167	-44%
Vision Centres established	1	1	0%

¹ Some case finding was done

² The PHC workers were trained in Child Vision Services

Performance against targets: Leadership development

Target	Target met?	Comments
Steering committee	YES	Objective partly achieved, but strategy unlikely to build adequate Leadership and management for project / programme development
Signed agreement with MoH	YES	
Eye care programme coordination (assumed)	YES	
Maintenance technicians	YES, BUT	
Maintenance protocols	NO	

Performance against targets: Diabetic retinopathy services

Target	Target met?	Comment
DRS staff trained	YES	Major achievement of the project and partnership agreement. Screening output far exceeds management capacity at this stage. IPMS highly over-rated value add to the referral chain in low resource setting. Simpler / less costly mechanism such as print image attached to referral letter should be considered. Alternatively, email or "Dropbox" facilities can be used to send images to treating ophthalmologists. NOTE: Women seems to make use of the service far more than men, to the order of 2.5 to 5 times.
DRS services established	YES	
18000 screened	NOT SURE	
Number treated	NOT SURE	
Integrated Patient management system installed (assumption)	NO	

Performance against targets: Child Vision services

Target	Target met?	Comment
Number of children referred	NOT SURE	Integrated child eye health services established, but sustainability threatened due to: <ul style="list-style-type: none"> - Work-intensive direct screening method - Uncertainty about availability of optometric services - Uncertainty about supply of free spectacles - Lack of secure supply of low vision devices - Lack of in-country paediatric ophthalmology services
Referral pathways in place	YES	
Basic screening and referral taking place	YES	

Performance against targets: Refractive error services

Target	Target met	Comment
60% increase in access to optometric services	NOT SURE	The "access" indicator is difficult to measure Partially achieved objective. More work is needed to deal with: <ul style="list-style-type: none"> - Income generation policies - Deployment of opticians to the vision centre - Utilization of optometrists in public sector - Involvement and influence of private sector optometrists in public sector
Optometrists refracting and prescribing or referring	YES	
Ophthalmic nurses refracting and prescribing or referring	NO, NOT ALLOWED	
Vision Centre established	YES	
Vision Centre sustained, i.e. actively delivering service as intended	NO	

The project had ambitious output targets, which were largely not met, but the project can celebrate some important achievements. Over the past 3 to 4 years, the project established new eye services, improved access to services, improved quality of care, developed capacity in human resources, infrastructure, advocated for the need of improved services, developed partnerships and helped to establish integrated services.

Here is a more detailed list:

- Establishment of Diabetic Retinopathy (DRS) services (4 units +1)
- Development of Child Vision Services (CVS) and Refractive Error Services (RES)
- Increased clinical service outputs for DRS, CVS and RES
- Steering committee established
- Human resource and infrastructural capacity was developed to deliver services
- A RAAB was completed, the second one in less than 10 years³
- Service integration amongst government ministries and the private sector
- The project helped to mobilise resources e.g. equipment bought, optometry posts created, etc.
- The project inspired learning and increased scholarship in eye care professionals: presentation at conferences, teaching and training, monitoring, developing curricula, interest in further studies and research (Dr Nuru Omari, a local ophthalmologist conducted her Master of Public Health research at the Block 6 Diabetic Centre)
- There is now increased access and coverage of eye care services on geographic, demographic and epidemiological bases
- The project inspired and supported the ophthalmic nurse training curriculum review initiative of the Institute for Health Sciences at Molepolole.

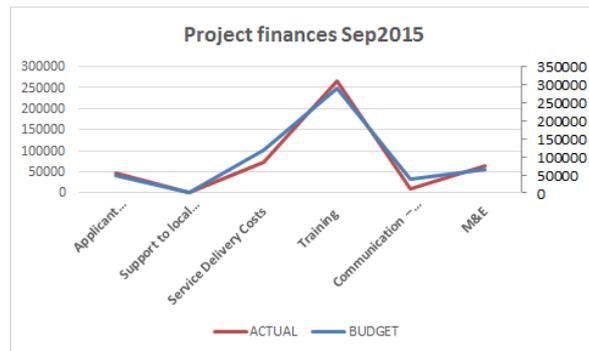
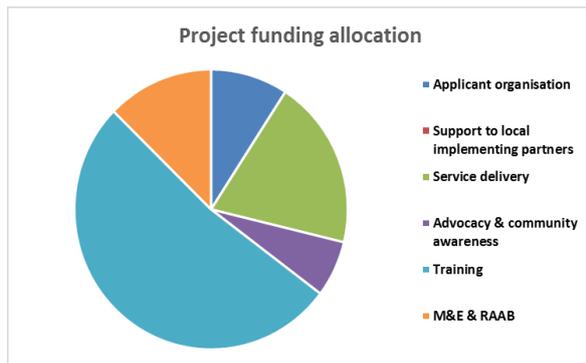
Project finances

Although finances are not regarded as an output deliverable in project plans, it is important to take cognizance that externally funded projects are not solely responsible for all the expenditure in a government-based programme. In most health systems, government plays a big role in the success or failure of a project, from an operational as well as a financial perspective. In the case of Botswana and the Pono Letlotlo project, we have not made an assessment of the financial contribution of the Ministry of Health or any other funding mechanism.

However, from our analysis, it is clear that the Pono Letlotlo project is largely a capacity building initiative, with budget allocations for training making up over half of the total. Just under 20% of the project budget was spent on infrastructural elements of the project (supplies, equipment, etc.) See figures. This is an important factor to consider when looking at the allocation of deliverables and decision-making around financial matters, as it underwrites issues of ownership and accountability.

At the time of last reporting, the project expenditure was well within expectations, with some transactions pending.

³ The first RAAB in Botswana was conducted in 2006. The second RAAB was conducted as part of the Pono Letlotlo project.



Project impact

The project impacted positively on all the strata of the Botswana eye health landscape, in the following ways:

- There is increased access to eye care services in the country;
- There is increase demand for eye care services in the country;
- The project successfully attracted further interest and investment in eye care;
- The service better resourced in terms of infrastructural and human resource development
- There is increased interest and opportunities for further studies, teaching and research in eye care professionals
- There have been multiple lessons learned that can be applied for further development of eye care services in Botswana
- Several additional resources were mobilised, including funding for further projects, technical support and engendering research interest in optometrists and diabetic retinopathy.

Question	Findings
Have the project aims and objectives been met? (EFFECTIVENESS)	PARTLY, met many important targets
Have the benefits exceeded the costs incurred so far? (EFFICIENCY)	POSSIBLY, when considering benefits from Screening, Training and Case finding
Is there an improvement in access to and quality of services for the target population? (RESPONSIVENESS)	YES
What has been the effect of the project in the community it serves? (IMPACT)	Target beneficiaries: increased access, Eye care professionals: capacity building
How is the project contributing to the aims and objectives of the NPEC? (RELEVANCE)	Adequately aligned
What has the project achieved that will help to ensure that the partners can continue to conduct "project" activities without need for additional funding? (SUSTAINABILITY)	Mainly capacity building, training, infrastructural development, technology and knowledge transfer

Challenges

The fact that many of the disease control targets have not been met, should not detract from the remarkable achievements of the project management team, the participating health and education workers and the technical advisors and other facilitators of the project. The net return of the project far outweighs the investments in it.

There were many reasons for missing the targets, some attributable to challenges in the health system, some to design errors in the project plan and some because of weaknesses in the project management team. These include:

- Reported / perceived shortage of ophthalmologists, ophthalmic nurses
- Shortage of eye equipment and supplies
- Lack of capacity in Ministry of Health to coordinate monitoring and reporting activities
- Lack of computer infrastructure in some places
- Competing work pressures, particularly in busy clinics and those nurses in senior positions
- Lack of accommodation and transport for outreach teams
- Lack of retinal specialist in the public sector
- Lack of administrative support for school based case-finders
- Centralization in Ministry of Health affecting recruitment of staff and procurement
- Suboptimal communication in Ministry of Health affecting eye care team performance

Key lessons learned

- Knowledge transfers from experts are used to translate to entire eye care professional cadre
- PEEK⁴ technology can be effectively applied for case finding, aiding in demand generation
- Importance of using effective communication strategies to build stakeholder relationships
- Diabetic patients use their own books for self-monitoring
- Employing multiple strategies to support comprehensive eye health strategy
- By experiencing difficulties or failing to achieve expected results, we learned:
 - Not to train if you do not have the professional mandate to apply the skills
 - Not to screen if treatment is not available
 - To train coordinating staff in monitoring, communication and stakeholder management
 - To be creative in negotiating the challenges posed by health system structure and function
 - To limit the extent of remote project management in order to build local capacity

B. THE NATIONAL PLAN FOR EYE CARE

A Draft “National Plan for Eye care 2015-2019” was developed during a workshop with stakeholders in March 2015. The stakeholders included Ministry of Health representatives, eye care staff from referral centres, public and private sector optometrists and training institution staff. The basis for the planning workshop was the results of the RAAB conducted in 2014, which showed a general increase in the burden of blindness and visual impairment in Botswana. The draft report details the main Objectives and Activities planned to meet the Aim of reducing Blindness and Visual Impairment in Botswana by at least 25% from 2014 levels.

⁴ PEEK stands for “Portable eye examination kit”, which is an application using a smartphone to test eyes for common sight-threatening conditions. A PEEK project, led by the London School for Hygiene and Tropical Medicine’s International Centre for Eye Health (ICEH), has intersected with the Pono Letlotlo project in the area of Child Vision Services.

We conducted an assessment with a standard planning evaluation checklist and found that the plan is technically feasible, operationally suitable but not necessarily financially viable. See details below:

Technical feasibility	Operational suitability	Financial viability
<p>The plan is deemed to be technically feasible because:</p> <ul style="list-style-type: none"> • It is based on the inputs from experts in VISION 2020 programming in developing countries • The technology proposed is available and have been shown to work in similar settings • The necessary knowledge and skills are available • There are no foreseeable high risks in using the methods and equipment proposed 	<p>The plan is largely suitable for implementation because:</p> <ul style="list-style-type: none"> • The plan largely covers all the objectives required to achieve the aim of developing improved eye care services <p>However,</p> <ul style="list-style-type: none"> • The activities planned for leadership development are not deemed to lead to improved leadership in this setting; • Some quantitative targets for service delivery and human resource development are not properly aligned to the need identified. • There does not seem to be any attempt to align the NPEC with the National Health Strategy • The capacity to deliver the project plan outputs has not been accurately determined • The objectives do not always adhere to SMART principles 	<p>The plan cannot be determined to be financially viable because:</p> <ul style="list-style-type: none"> • No costing has been attempted to quantify the investment required; There is grave uncertainty about the financial commitments expected from the Ministry of Health; • The plan may put undue pressure on the Ministry of Health cash flow. • The activities schedule (and associated financial implications) may not be manageable given the current constraints; • All relevant financial policies and practices may not have been taken in consideration; and • The operational and financial implications of givens (assumptions) are not accurate calculated.

We also performed an appraisal of the plan in the context of the associated linkages with the Pono Letlotlo project and considerations for future development of the Botswana eye services. The following strengths and weaknesses were identified:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Clear disease control targets aimed to deliver significant impact on magnitude of blindness and visual impairment • Elaborate strategies to increase cataract surgical output in key centres • Detailed directives to improve quality of cataract services • Detailed strategies to develop and strengthen comprehensive and specialist eye services • Clear, achievable strategies for expansion and strengthening of services for diabetic retinopathy • Clear strategy for optometrist utilization in the public sector • Clear, achievable strategy for ophthalmic nurse deployment in eye care services • Clear, achievable strategies for additional staff requirements • Detailed targets set for each of the two referral centres • Detailed activity plan and Terms of reference in place for NEHC 	<ul style="list-style-type: none"> • Plan starting in 2015 developed in 2015, should have been for 2016 - 2020 • Mid-Term evaluation planned for too soon (2017) • Inadequate characterisation of need • Targets can be seen to be too ambitious given inadequate capacity to deliver • Cataract surgery output targets limited to two centres in the country • Recommendations for development and strengthening of comprehensive eye services inadequately prioritised and allocated for action • Inadequate elaboration of strategies to strengthen services for glaucoma, the second highest cause of blindness in Botswana • Concentration of ophthalmologists in only two centres not adequately justified, given the need for increased accessibility • Inadequate consideration of the involvement of private optometrist in the public sector • Inadequate consideration of implications of the strategies for securing the provision of consumables, equipment and maintenance

A well-constructed plan, once accepted, approved and funded can be a road map to success in implementation, that is, meeting the targets as planned within given time and cost parameters.

It can also be used for the following:

- To make a statement about the influence, interest and importance of the plan / planner to key decision-makers;
- To register an intention to lobby, negotiate and challenge for acceptance of the plan;
- To join a (sometimes elite) group of senior management and strategists on an executive (decision-making) level ;
- To pioneer a new strategy or paradigm of thinking for the unit or programme (demonstrate leadership); and
- To serve as example for other programmes to follow, this could raise the profile of eye care in the health sector.

The main purpose of a plan is to be used as a marketing tool, (frequently to those who are neutral towards your cause or do not deem your plan important):

- To gain support for the initiative from key stakeholders including the service users and service providers (support = agreement, engagement);
- To obtain acceptance by the key decision-makers like the facility managers, Heads of Health, National coordinator (Acceptance = approval, may be “in principle”); or
- To secure funding from the Ministry of Health, corporate business and international NGOs.

Therefore, urgent consideration must be given to complete the plan, cost the plan and sell the plan.

C. STAKEHOLDER ENGAGEMENT

The key stakeholders of Pono Letlotlo project eye project include the following broad groups:

- The Ministry of Health (referred to here as “internal”) based at Head Office in Gaborone
- The Ministry of Education and Social Development
- Public sector providers of eye care services
- Private sector providers of eye care services
- Partners of the government eye care services, e.g. Addenbrooke’s Abroad
- Beneficiaries of the project, e.g. potential users, communities, civil society

Ministry of Health

The responsible agency for delivering eye care services to the majority of the population of Botswana. Eye care enjoys less than required interest, involvement and investment, due to the need to prioritise more pressing morbidity and mortality threats from conditions like TB, HIV and malaria. This is a common pattern in health systems globally.

The Ministry of Education and Social Development

Using teachers as case-finders in schools has been a huge success in the project and helped to further integrate school eye health services in the social sector. However, the full implications of the schools screening services may be felt only after the pressure on participating schools / teachers becomes too high. The success of the initiative so far can be attributed to the high level of ownership and professionalism exhibited by the school community.

Addenbrooke’s Abroad

Since its establishment in 2006, Addenbrooke’s Abroad has developed several international health partnerships through reciprocal knowledge and skills exchange between partners. In 2009, Addenbrooke’s Abroad entered into a Memorandum of Understanding with the Ministry of Health of Botswana and Cambridge University Hospitals. The Pono Letlotlo project is the result of successful lobbying, fund-raising and planning, involving a variety of initiatives and contractors.

Standard Chartered Bank

A commercial financial institution which changed the landscape of eye care programme funding globally through the *Seeing is Believing* campaigns. The Botswana eye health programme has benefitted from two *Seeing is Believing*-funded initiatives over the last 5-6 years.

Eye service providers

The numerically adequate contingent of government eye service providers are deployed throughout the country according to an “equitable access” policy. Somehow this way of resource distribution is not successfully addressing the increasing burden of avoidable blindness in the country. The private sector is relatively small but yields significant power in the government health services.

Target beneficiaries

Although this group of stakeholders are clearly defined on paper, we found it difficult to fully characterise the end users of the services or their organised representatives. Undoubtedly, they have enjoyed improved access to services over the duration of the project. We know they are the poor, young children, older people and those with diabetes, but we have little understanding of who they are, their ability / inability to pay, their eye health seeking behaviour, their uptake of services.

Effective stakeholder management is an important determinant of the success of a project like the Pono Letlotlo project. Every stakeholder has some specific interest or influence in a project like this. This should be carefully managed by other stakeholders, especially those responsible for the project. A simplified stakeholder map is as follows:

Stakeholder	Interest in project	Importance / Involvement in project	Influence in the success of the project
Ministry of Health	VARIABLE	VARIABLE	HIGH
Public sector	HIGH	HIGH	HIGH
Ministry of Education	HIGH	VARIABLE	MEDIUM
Private sector	VARIABLE	LOW	MEDIUM
Partners	HIGH	HIGH	HIGH
Beneficiaries	VARIABLE	LOW	HIGH*

There is high interest and involvement in the provider and partner group. However, some important stakeholders in the Ministry of Health show low interest. Some stakeholders with high influence do not regard the eye project as important, and the most important stakeholders, the target beneficiaries do not seem to be involved at all! These are important factors which should be considered when designing an eye care service.

PARTNER CAPACITY

The Pono Letlotlo project (and this evaluation) identified many strengths in the architecture of the partner, the Ministry of Health, which can be summarised as political will from senior Ministry of Health officials, teamwork, abilities to integrate services and a highly dynamic ophthalmic nurse cadre. There is also a good number of ophthalmologists, although many on short-term contracts.

However, there are many weaknesses including human resource, stakeholder and financial / resource management and reporting challenges making it difficult to achieve lasting gains without dealing with these conclusively. At this stage the capacity to deal with some of these issues are lacking. There are very real threats of staff attrition, cultivated dependency and complacency, skills erosion (which can happen if the project activities are not sustained), and most importantly, funding dry out. Managing these threats and grasping the opportunities are key tasks for a competent and committed leader in eye care in Botswana to focus on. See SWOT analysis below.

SWOT analysis

<p><u>STRENGTHS</u></p> <ul style="list-style-type: none"> • Botswana has an upper middle income country economic status • More favourable economic and political environment than most other African countries • Addenbrookes Abroad is a longstanding, committed and reliable development partner • Ministry of Health has shown ability and willingness to contribute to capital resourcing of eye care plan • Relatively high ratio of ophthalmic nurses to population: more than 3:100000 (WHO-IAPB recommendation 1:100000) • Well-organised and resourced health professional training facilities • Ministry of Education and Social Development is committed and interested in participation in integrated child eye health strategy • Information Patient Management System up and running in most settings • Strong ownership and interest in most Ministry of Health clinical workforce • Standard Chartered Bank Botswana is in strong support of continued involvement • Quality assurance and technical support is available mostly on voluntary basis from technical advisors 	<p><u>WEAKNESSES</u></p> <ul style="list-style-type: none"> • Incomplete NPEC which has not been officially launched • Unguided statistical reporting • Travel and transport difficulties • RAAB results not optimally utilised for planning, advocacy and service delivery designing • Sub-optimal utilization of specialty staff due to poor distribution, recruitment and equipment • Inactive National Eye Health Committee, Inactive district eye care committees • Excessive centralization resulting in increased delays in administration • National eye health office poorly capacitated for proper coordination of eye care activities • National eye health office poorly capacitated to manage internal stakeholders • National eye health office poorly capacitated to manage multiple projects • Low community participation • Quality monitoring system mostly external • Lack of staff to run optometry services at Vision Centre, unstaffed since Sep 2015 • Poor monitoring and reporting strategy and structure • Poor participation in steering committee activities • No strategy to deal with procurement and financing of spectacles, low vision devices, etc. • Extremely centralized procurement system • Low drive, initiative and motivation in National Eye Programme Management office • Low motivation in leadership at coordination level • Shortage of local ophthalmologists to spearhead development of ophthalmic services • Coordinator too busy with multiple projects, less focus on programme
<p><u>OPPORTUNITIES</u></p> <ul style="list-style-type: none"> • Standard Chartered Bank Botswana interest to remain involvement in eye care • Trainer can train more staff in CVS, DRS • Good infrastructure and equipment available in key centres • Private optometrists very involved and interested in government work • Institute of Health Sciences has capacity to create highly competent eye care work force • Availability of trained equipment maintenance officers • Training for business planning of Vision centres available • Possibility of income generation for sustainability, e.g. RES and DRS • Mobile stops can be used to access remote places • Ministry of Health commitment to contribute to eye care capital development • Well-designed and equipped facilities • Energetic and dynamic staff at service delivery level • Strong social connectedness amongst professional cadres and technical advisors • Access to high quality and intensity DR I&G training, monitoring and QC • Willingness and interest of Technical Advisors to continue working with Ministry • Continued availability of support (and possibly) funding for the DR Service through the VISION 2020 LINKS programme 	<p><u>THREATS</u></p> <ul style="list-style-type: none"> • Delay in resuming ophthalmic nurse training • Redeployment of key nursing staff out of eye care • End of project investment • End of Vision Aid Overseas involvement • Overwhelmed eye care coordination team • Spectacles supplies running out at Vision Centre • Project-weariness spills over key health and education areas • Delay in finalising curriculum review for ophthalmic nursing training • Patient management information system failure to keep up with technological requirements for comprehensive eye care services

6. DISCUSSION AND RECOMMENDATIONS

The Pono Letlotlo project has come to the end of its term, with many more wins than expected. The project succeeded in achieving many of the targets set, including completing of training targets, establishment of new service and improvement of existing services. The impact of these include increase in access to quality eye care services for a greater demographic and geographic beneficiary pool, as well as broadening the scope of service availability to the public service users of Botswana. The project also generated a contingent of highly trained and motivated eye care staff, capable of driving the agenda of improving eye care services much further in the time ahead.

The project underperformed with regards to some services delivery targets set, primary due to unrealistic expectations to deliver despite frailties in the programmatic capacities of the National Eye Care Programme. These limitations include poorly capacitated National Eye Care Programme office, lack of advocacy activity of the National Eye Health Committee, local project management deficiencies and unsuitable strategies relating to staff deployment, recruitment and performance management, procurement of supplies and monitoring and reporting systems.

The lessons learnt are listed in the Findings chapter. Assimilation of these lessons are necessary, especially those learned or learnable through error, which are mostly elaborated in the Recommendations section. The most important lesson is a compendium of knowledge and skills that have been applied in developing comprehensive eye care services in Botswana.

The National Plan for Eye Care, which is still in “draft” format, is incomplete, requiring better characterization of the need in order to justify the interventions it proposes. The latter are well-stated, comprehensive and largely responding to the need identified through the RAAB survey (2014) and a situational analysis done in 2012. This may need revisiting, especially to incorporate an assessment of the capacity of the implementing agency (Ministry of Health).

Such an assessment should focus on determining the Ministry of Health’s:

- Commitment and engagement at executive level to eye care
- Partnerships with international development organisations
- Engagement with the private sector to contribute to public sector eye care
- Available infrastructure for use in eye care service delivery
- Involvement of the corporate sector (NB: mining industry!)
- Strategies to encourage community participation
- Systems and policies that may facilitate or hamper plan progression
- Internal ability to advocate, market and implement the plan

This capacity of the Ministry of Health to facilitate and support future strategies for improvement of eye care services is largely contained in the SWOT analysis of this report. The main strengths of the Ministry of Health lie in the demonstrated willingness to build capacity in eye care service development, and its ability to maintaining longstanding partnerships. The Pono Letlotlo project helped to build human resource and infrastructural capacity, providing opportunities for further development in eye care in the country.

The main weakness is inadequate leadership development for eye care, with resulting low capacity of the National Eye Health Programme to develop and implement effective strategies for elimination of avoidable blindness. There are also challenges in negotiating the intricacies of the health system to obtain the best results despite limitations.

The Ministry of Health’s National Eye Health Programme is further threatened with risks of staff attrition and failure to fill key vacant posts, funding and partnerships ending, insecure supply chain and possible project overload exhausting the already overworked eye care coordination team.

Effective risk management helps to control the effects of possible threats in an organisation. There are three broad strategies for managing risk: prevention, minimization of the effects and maximising the benefits salvaged in the event of an adversity. Typical ways of controlling risks include having suitable policies in place, insurance and safe storage (for physical assets) access and performing routine maintenance. The latter is particularly critical for managing stakeholder relations!

As part of the ongoing planning for eye care in Botswana, the identified risks should be assessed in terms of likelihood to occur and the potential effect on the programme. In general, those seen to be high risk, should be actively managed. This means that activities should be included in plans, adequately scheduled and budgeted for. For the medium risk eventualities, contingency plans should be in place and backups should be made. Low risk items require only low level monitoring, usually of the external environment.

When considering where the National Eye Care Programme is coming from (refer to the Situational analysis and various other progress assessment reports), there has been much improvement over the last 5 years or so. A 2016 review of a VISION 2020 Report Card (a UCT-CEHI developed tool used in Advocacy training) completed by the incumbent NECP Manager in 2011 confirms this (see below).

VISION 2020 REPORT CARD SUMMARY		BOTSWANA	
DISEASE CONTROL	5-YEAR TREND	INFRASTRUCTURAL DEVELOPMENT	5-YEAR TREND
Cataract surgical rate	SAME	V2020 centre per million population	IMPROVED
Screening / case finding for cataract	SAME	Dedicated eye care teams*	IMPROVED
Spectacles provision	IMPROVED	Adequate facilities*	IMPROVED
Glaucoma treatments	SAME	Training opportunities	IMPROVED
Diabetic retinopathy treatments	IMPROVED	Transport availability	SAME
Low vision service	IMPROVED	Equipment supply chain	SAME
Child eye health service	IMPROVED	Materials supply chain	SAME
Primary eye care	SAME	Access to technology	IMPROVED
HUMAN RESOURCE DEVELOPMENT		OTHER HEALTH SYSTEM ELEMENTS	
# ophthalmologists	IMPROVED	Adequate budget for eye care	SAME
# optometrists	IMPROVED	National eye care plan	IMPROVED
# ophthalmic nurses manager / million	SAME	National eye care committee	IMPROVED
technician / programme	IMPROVED	District eye care plan	SAME
oph tasks skills match	IMPROVED	District eye care committee	SAME
opt tasks skills match	IMPROVED	Intersectoral collaboration	IMPROVED
opn tasks skills match	IMPROVED	NGO / corporate partnerships	IMPROVED
man tasks skills match	IMPROVED	Routine monitoring of eye care	SAME
		Health management information systems	IMPROVED

Looking at the summary above, it is notable that Service delivery for the main eye care priorities largely remained the same over the 5 year period, even though Human resource development, Infrastructural development and several other Health system elements improved. This could be telling us that the Service delivery strategy should be revised. While the Ministry of Health has certainly increased investment in the eye care service, the influence of the partnership investment in the case of the Pono Letlotlo project cannot be overlooked.

It is therefore our overriding recommendation that the project goal of improving services to prevent blindness in Botswana be pursued with greater vigour and determination by the Ministry of Health and Addenbrooke's Abroad, an organisation that now has an almost decade-long relationship with the Botswana Ministry of Health. This may require that they (Addenbrooke's Abroad) continue to avail their expertise in project administration, resource mobilization and advocacy to the Ministry of Health, in addition to their vast resource of technical expertise and links with even more resources. Continued joint activity on eye health within the ongoing V2020 Link is also suggested.

It may also require that the Ministry of Health undertakes to fully capacitate the NEHP office, including but not limited to: providing administrative support, equip with necessary work resources (telephone, transport), establishing a mentorship programme to develop the leadership and management skills necessary to implement a robust national eye care plan, and revise the organogramme to better support the NEHP office staff through supervision, performance management and more effective line function.

For improvement at programme level, we make the following further recommendations:

- i. To attract more local eye care professionals into government health services with the aim of developing them into posts of higher seniority in the Ministry of Health.*
- ii. To revive the National Eye Health Committee and District eye care committees in order to more purposefully drive the development and implementation of the NPEC.*
- iii. To complete the National Plan for Eye Care, prioritising appropriately according to need and making suitable provisions to incorporate strategies for sustainability (government commitment, community participation, integration and financial viability).*
- iv. To revise the design of eye care services (along with the NPEC), in particular, to sharpen focus on optimal utilization of eye care staff, targeting priority conditions, developing suitable clinical guidelines and screening strategies that are both effective and efficient.*
- v. To strengthen stakeholder relations, in particular to involve target beneficiaries and the representatives more; make use of the network of tribal, religious, traditional, political and corporate factions in the communities to raise awareness, help with advocacy and increase uptake of the services where capacity allows.*
- vi. To develop an advocacy strategy to address some of the key issues that hamper optimal implementation of eye care strategies in the country. (This should be driven from within the Botswana health system, preferably with a strong local agent at the helm.)*
- vii. To assimilate greater understanding of the policies and principles of health service management in the Botswana health system, in order to be able to negotiate ways through it and not always being stymied by the difficulties encountered.*

For improvement at project level, we make the following further recommendations:

- viii. To provide training in project management, monitoring and evaluation, advocacy and stakeholder management to local eye care coordinators.*
- ix. To ensure more ownership is assigned to local partner when developing new projects by appointing a project manager responsible for all the relevant project duties, including responsibilities for financial management and project monitoring.*
- x. To accurately calculate costs associated with implementing an initiative in a health system like this one. (It is easy to miss out on some important assumptions, which, if overlooked, can be the cause of project failure.)*
- xi. To develop monitoring tools and factor in training for monitoring and reporting when implementing such a project. (This should be based on a set of indicators that are SMART.)*
- xii. To close out the Pono Letlotlo project with proper feedback, lessons learned and next steps workshop.*

The table contains some suggestions to consider for specific elements of the eye care strategy.

	Community	Eye care programme	Health system
CVS	<ul style="list-style-type: none"> Sharpen awareness with focus on preventative practices 	<ul style="list-style-type: none"> Revise strategy to target priority conditions, while setting up services that suit capacity and demand, implement “soft” screening⁵ strategy, develop out-referral strategy to neighbouring countries for selected conditions. Mass direct screening is not necessarily the best approach for sustainable programme service delivery as input requirements too much, dependent on too many variables, no room for prioritization regarding treatment Setting up tertiary service not indicated. 	<ul style="list-style-type: none"> Develop integrated child / school health strategy to address screening, treatment and referral
RES	<ul style="list-style-type: none"> Market services specifically to people willing to pay for income generation 	<ul style="list-style-type: none"> Fill optometrist and optical assistant posts at Vision Centre, develop cost-recovery mechanisms, contract private optometrists to provide refraction services if necessary 	<ul style="list-style-type: none"> Simplify procurement and recruitment, decentralise where possible
DRS	<ul style="list-style-type: none"> Develop communication strategies (texting, WhatsApp) to improve uptake and follow-up, Increase awareness with posters and pamphlets 	<ul style="list-style-type: none"> Standardise imaging, grading and treatment protocols throughout public health system, explore cost-recovery mechanisms for private patients). Print images or use email or Dropbox to send images to retinal specialists. Record daily statistics and report monthly to NEHP office for monitoring 	<ul style="list-style-type: none"> Conduct integrated monitoring and reporting to track progress
L&M ⁶	<ul style="list-style-type: none"> Revive district committees, improve community participation; Involve a public figure to act as advocate 	<ul style="list-style-type: none"> Clarify goals and objectives, Develop suitable strategies for leadership development, including reactivation of NEHC, with specific mandate to develop and market the NPEC. 	<ul style="list-style-type: none"> Engage constructively with other health disciplines regarding cross-cutting issues

Further suggestions for project management in programmes

The VISION 2020 Links programme developed monitoring and evaluation resources for use in participating projects, but these have largely not been successfully internalised in the Ministry of Health. The Pono Letlotlo project attempted to assign some project management responsibilities to project leads, also with limited success.

To develop project management capacity in a programme setting:

- Identify a “project manager” responsible for all project activities, according to project management principles, and located proximally to the project location;
- Involve the project manager in all aspects of the planning cycle, from definition of SMART objectives to budgeting and scheduling of activities;
- Launch the project publicly, making sure the project manager’s roles and responsibilities are clear to the key stakeholders of the project;
- Give the project manager full authority to manage the project, including implementing activities, monitoring progress, inputs and outputs, and making decisions about finances.

⁵ “Soft” screening strategy is an indirect form of screening where non-eye health people like teachers identify children with eye problems using a simple checklist, and then refer to eye health professionals for assessment and management. The teachers are not required to do any eye tests on children, and do not have to dedicate specific time to conduct this screening. The approach was developed in a pilot study for the Whole School Eye Health project in 2012.

⁶ L&M = Leadership and management development, which is one of the four objectives of the Pono Letlotlo project

Further suggestions for stakeholder management in programmes

Generally, stakeholder should be managed according to the level of power (influence) they have in determining the success or otherwise of an initiative, together with whether they are in support of, neutral to or against such initiative. The following table summarises the strategies to employ in managing the different stakeholder groups.

STAKEHOLDER CATEGORY ⁷	EXAMPLE ⁸	MANAGEMENT STRATEGY
HIGH INFLUENCE HIGH INTEREST	MoH DPH and DCS Addenbrooke's Abroad, MoESD, Botswana Optometric Association	Manage closely and involve, attend meetings, set up regular engagements, acknowledge contributions
HIGH INFLUENCE LOW INTEREST	MoH DHTM, Facility managers Government support, BHPC	Keep informed and satisfied, adhere to requirements, circulate reports, share best practices
LOW INFLUENCE HIGH INTEREST	The target beneficiaries, their dependents and care-givers	Keep informed and install feedback mechanisms, provide continuing health education, train mobilisers
LOW INFLUENCE LOW INTEREST	The general public, especially service users in other sectors	Monitor, scan media for changes in attitude towards your cause, raise awareness via common platforms

Further suggestions for improvement of the National Plan for Eye Care

It is critically important to complete the NPEC, by including some of the missing elements in the current Draft plan, (e.g. the need, the costing and monitoring strategies), prioritise the deliverables, market the plan and launch for proper implementation. This plan should also be incorporated into the National Health Strategic plan, ensuring that alignment with the core strategy is clearly shown. This will help to "sell" the plan to the broader Health community. While advocating for the plan's implementation, it is important to put some of the key indicators (like disease control, human resource development and infrastructural development targets) on the "dashboards" of senior Departmental officials, like the Deputy Permanent Secretary for Public Health, and the Deputy Permanent Secretary for Clinical Services.

The plan should be launched with sufficient high-level government and stakeholder involvement, and with appropriate resource allocation for implementation and monitoring by the National Eye Health management office. A marketing strategy for the NPEC should involve a meeting convened by the NEHC, and attended by all key stakeholders, presenting

- Description of need
- Intervention strategy, especially by:
 - Balancing the need with the capacity
 - Prioritising the disease control strategy relevant to the need
 - Increasing human resource development focus on local capacity development
 - Defining SMART leadership development objectives
 - Incorporating gains from the Pono Letlotlo project
- Costing of annual action plans
- Funding strategy over 5 year period
- Establish commitment, ownership and agency, in other words, the motivation and momentum to make the implementation successful.

⁷ This refers to influence (POWER) or interest (POSITION) the stakeholder has in the affairs of the initiative, in this case, Pono Letlotlo eye project. For example, target beneficiaries as individuals generally have high interest but low influence, but have more influence when organised in a civil society, such as a Disabled Persons Organisation.

⁸ MoH = Ministry of Health, DPH = Department of Public Health, DCS = Department of Clinical Services, BOA = Botswana Optometric Association, MoESD = Ministry of Education and Social Development, DHTM = District Health Management Team

7. CONCLUSION

The Pono Letlotlo Project has been successful in improving services to prevent blindness in Botswana. The broad impact of the project is improved access, establishment of services and trained eye care workers. More advocacy is required to mobilise internal resources for future sustainability.

We learned several lessons around the practicality of designing comprehensive eye services, integrating services and mobilising the professional cadres for capacity development. The project's relative disconnect with surgical ophthalmic services may have been a factor in its failure to gain traction from, in particular, the ophthalmologist group and senior health ministry officials. This is mainly to do with "dashboard" issues, in other words, whether this is important enough for them. There are too few local eye care professionals interested in and involved in the national eye care programme.

The main achievements of the project, those to do with establishing services, training of staff and creating the demand, should now be packaged in a national strategy for implementation. This means that the current National Plan for Eye Care needs to be revised, completed and marketed for implementation. The main question here is: how can this be accomplished, given the current lack of capacity in the National Eye Care Programme office?

The problems the Pono Letlotlo project faced from a funder perspective include:

- Components of a service established where a sustainable foundation was lacking;
- Some of the disease control targets were too ambitious;
- Project record-keeping was sub-optimal due to weak monitoring strategy;
- Project remained that of Addenbrooke's Abroad, with little decision-making and ownership of inputs and processes from Ministry of Health side, but expected to produce outputs;
- The project was seen to be co-managed, but NECP management team's role was mainly coordination and administrative.

It is important to celebrate easy wins, for example, the thousands of school children and people with diabetes who were screened for eye conditions, who did not need spectacles or treatment: the "negative" screening promotes a culture of prevention, and the school children and people with diabetes have been "cleared" of having eye problems. It is a major achievement.

In the future of the Botswana Ministry of Health and Addenbrooke's Abroad's partnership relationship, it should be useful to concentrate more on building local ownership, as that is one sure way of making services sustainable.

The Pono Letlotlo project partners (Addenbrooke's Abroad, the VISION 2020 Links programme, Seeing is Believing, Vision Aid Overseas and the National Eye Care Programme staff should be commended for making giant strides in improving eye care services in Botswana.

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- To Mr Mokgeetsinyane and Dr Jibril and other members of senior management in the Ministry of Health: Department of Public Health, who kindly shared with us their views of the Pono Letlotlo Eye project and the National Eye Care Programme,
- To Ms Moruisi in the Ministry of Health: Department of Clinical Services, who kindly shared with us their views of the Pono Letlotlo Eye project and the National Eye Care Programme,
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- To the leadership and staff at the Institute of Health Sciences, Molepolole
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10. APPENDICES

- A. Evaluation standards check list
- B. Evaluation framework questions
- C. Resource list

<END OF EVALUATION REPORT>

THE EVALUATION STANDARDS CHECKLIST

1. All persons or groups of people involved in or affected by the evaluation should be included in the process so that their needs can be addressed.
2. The evaluation team is made up of competent, suitably qualified and trustworthy professionals committed to produce findings that are credible and relevant to the aim and purpose of the evaluation.
3. Information used for the analysis will answer pertinent questions regarding the program and be responsive to the needs and interests of clients and other specified stakeholders.
4. The perspectives, procedures, and rationale used to interpret the findings will be clearly described so that the bases for value judgments are clear.
5. Evaluation reports will clearly describe the program being evaluated, including its context and the purposes, procedures, and findings of the evaluation so that essential information is provided and easily understood.
6. Substantial interim findings and evaluation reports will be disseminated to key stakeholders so that they can be used in a timely fashion.
7. The evaluation will be planned, conducted, and reported in ways that encourage participation of the key stakeholders to increase the likelihood of the evaluation being used.
8. Collection of information for the evaluation will not interfere with normal activities of the programme and disruptions will be kept to a minimum.
9. During planning and conduct of the evaluation, consideration will be given to the positions of the various stakeholders, and other information relevant to the aims and objectives of the evaluation.
10. The evaluation will produce valuable information for application in the ongoing development of the programme.
11. The evaluation will be designed to help the programme address effectively the needs of the target beneficiaries.
12. The key parties involved in the evaluation are in agreement as to their roles and responsibilities under this Terms of Reference.
13. The evaluation will be designed and conducted in a manner that respects and protects the rights and welfare of all human subjects.
14. Members of the evaluation team will interact respectfully with other persons associated with the evaluation, and exhibit common courtesies where required.
15. The evaluation will be complete and fair in its examination and recording of strengths and weaknesses, and opportunities and threats of the program.
16. The key parties involved in the evaluation will ensure that the full evaluation findings with pertinent limitations are made available to all stakeholders of the programme.
17. Conflict of interest should be handled openly and honestly so that the evaluation processes and results are not compromised.
18. The cost and expenditure during the evaluation will be prudent and ethically responsible.
19. The program being evaluated will be documented clearly and accurately.
20. The context in which the program exists will be examined in enough detail to identify probable influences on the program.
21. The purposes and procedures of the evaluation will be monitored and described in enough detail to identify and assess them.
22. Sources of information used in the program evaluation will be described in enough detail to assess the adequacy of the information.
23. Information-gathering procedures will be developed and implemented to ensure a valid interpretation for the intended use.
24. Information-gathering procedures will be developed and implemented to ensure sufficiently reliable information for the intended use.
25. Information collected, processed, and reported in the evaluation will be systematically reviewed and any errors corrected.
26. Quantitative information will be analyzed appropriately and systematically so that evaluation questions are answered effectively.
27. Qualitative information will be analyzed appropriately and systematically to answer evaluation questions effectively.
28. Conclusions reached will be explicitly justified for stakeholders' assessment.
29. Reporting procedures will guard against the distortion caused by personal feelings and biases of any party involved in the evaluation to reflect the findings fairly.
30. The evaluation will be formatively and summatively evaluated against these and other pertinent standards to guide its conduct appropriately and, on completion, to enable close examination of its strengths and weaknesses by stakeholders.

Adapted from: *Joint Committee on Standards for Educational Evaluation. Program evaluation standards: how to assess evaluations of educational programs. 2nd ed. Thousand Oaks, CA: Sage Publications, 1994.*

EVALUATION FRAMEWORK

ASPECT	Guiding questions	Sources of information
Stakeholder engagement	Who are the stakeholders of the project? How are the stakeholders involved in the project?	Document reviews Stakeholder interviews
Programme description	What is the structure and function of the project? What is the aim and purpose of the project? What have the project achieved over the last 4 years? What have been the main challenges the project has faced? What resources have been available to overcome the challenges? What is the partner's strengths and weaknesses?	Document reviews Consultation with SiB Partner interviews Site visits to make observations of staff, facilities, equipment, practices and procedures
Current project issues	Have the project aims and objectives been met? (EFFECTIVENESS) Have the benefits exceeded the costs incurred so far? (EFFICIENCY) Is there an improvement in access to and quality of services for the target population? (RESPONSIVENESS) What has been the effect of the project in the community it serves? (IMPACT) How is the project contributing to the aims and objectives of the NSECP? (RELEVANCE)	Document reviews Stakeholder interviews Partner interviews Site visits to make observations of staff, facilities, equipment, practices and procedures Reference materials
Strategy and sustainability	What is the SWOT and capacity of the partner? How can leadership and management be improved? What risk management strategies should be implemented? How should an effective monitoring system be established? What is the partner's future plans to improve eye care services? How can lessons learned be applied in the future? How suitable is the new NSECP in the context of i) the need identified, ii) the interventions proposed, and iii) the capacity of the project? What is the current progress of the NSECP against its objectives?	Consultation following preliminary report presentation

DATA & DOCUMENTS REVIEWED

- Project statistics for last 3 years (2014-2016),
- SiB Monitoring reports for last 3 years,
- SiB Financial reports for last 3 years,
- Project reports (from Botswana Ministry of Health) for last 3 years,
- Project income and expenditure report (calendar year-end) last 3 years (if available),
- Project audit reports last 3 years,
- Project inventory (latest available),
- Current year project budget,
- Current multi-year plan,
- Staff list (including designations and date of appointment),
- Reports of training activities for the last 3 years,
- Example of a training schedule for each of the training programmes offered,
- Training participant list since inception
- List of project stakeholders ,
- Botswana Prevention of Blindness Programme annual report or Strategic plan.
- Various policy documents and other relevant sources

KEY STAKEHOLDERS INTERVIEWED

- Ministry of Health
 - *National Eye Health programme staff*
 - *Director of Public Health*
 - *Head of Disease Control Division*
 - *Child Health Department*
 - *Director of Clinical Services*
 - *Deputy Permanent Secretary, Clinical Services*
 - *Deputy Permanent Secretary, Preventative Services*
 - *Chief Biomedical Engineer*
- National Eye Health Committee members (Mr Maje)
- Dr Oathokwa Nkomozana (not interviewed)
- Standard Chartered Bank
 - Ms Tumie Ramsden, Head of PR*
 - Mr MK Lekaukau, CEO*
- Botswana Optometrists Association
 - Mr Maje
 - Ms Thanuja Panicker
- Institute off Health Sciences
- District VISION 2020 Committee members (not interviewed)
- Past and current beneficiaries (not interviewed)
- Ministry of Education
 - *Regional Services Division and Department of Special Support Services*
 - *Regional Education officers – Kanye, Francistown, Serowe*
 - *Centre for Special Support Services – Tlokweng*
- Medical Superintendent – PMH, SLH, SMH, NH (Not interviewed)
- Head Doctors and Matrons of Eye Units – SLH, SMH
- Diabetes Clinic staff – *Block 6, Serowa & Donga*
- DRS Leads – *Dr Musana, Sr Pearl Mbulawa, Ellen Moeng*
- DRSS nurses – PMH, KSDA, SLH, NH, SMH
- CVS leads – *Sr Ditso, Sr Pilatwe, Moss, Ruth*
- Optometrists & VC technicians – PMH, SMH
- DHMT heads – Serowe, Kanye (not interviewed)
- Addenbrooke’s Abroad technical advisors (email questionnaire)