Sightsavers

End Term Evaluation Of The Mumbai Eye Care Campaign

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Prepared by

KPMG India Private Limited

Acknowledgements

The evaluation has been conducted by KPMG India Private Limited, who is the primary author of this evaluation report and appendices. The KPMG evaluation team members and their roles are as follows:

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List of Abbreviations

Acronym	Description
ATM	Automated Teller Machine
BPL	Below Poverty Line
CBO	Community Based Organization
CHW	Community Health Worker
D2D	Door to Door
DR	Diabetic Retinopathy
ENT	Ear, Nose and Throat
ERP	Enterprise Resource Planning
GAP	Global Action Plan
GOI	Government of India
HDM	Human Development Measure
HR	Human Resources
IAPB	International Agency for the Prevention of Blindness
IEC	Information, Education and Communication
KBHB	Khan Bahadur Haji Bachooali Eye and ENT hospital
LEH	Lotus Eye Hospital
LCO	Lotus College of Optometry
M&E	Monitoring and Evaluation
MCGM	Municipal Corporation of Greater Mumbai
MIS	Management Information System
MECC	Mumbai Eye Care Campaign
MV	Mobile Van
NGO	Non Governmental Organization
NPCB	National programme for Control of Blindness
OECD-DAC	Organization for Economic Co-Operation and Development–Development Assistance Committee
OPD	Out Patient Department
RE	Refractive Error
VC	Vision Centre
WHO	World Health Organization
YoY	Year on Year

Executive Summary

Eye health is one of the least prioritized public health problems as compared to other health issues globally. As per the estimates by the World Health Organization (WHO), about 285 million people are visually impaired. It clearly states in its' Global Action Plan (2014-19) that if refractive error services and cataract treatment are provided on priority basis, about two-thirds of the visually impaired population will recover good sight. More than 90 percent of visually impaired people live in developing countries, where the health sector is constrained by lack of affordable and accessible infrastructure.[1]

Vision 2020, a joint programme of the World Health Organization and the International Agency for the Prevention of Blindness (IAPB) with an international membership of NGOs, professional associations, eye care institutions and corporations, clearly advocates the need to improve awareness and strengthen the national programmes on eye health.

Standard Chartered Bank's "Seeing is Believing" is an important intervention aimed towards tackling avoidable blindness. The programme is run in partnership with IAPB and a global collaboration of leading eye care NGOs. As a part of this programme, the Mumbai Eye Care Campaign was developed to reduce the incidence of refractive error in the urban slums of Mumbai. Standard Chartered bank provided 80 percent of the total programme funding (USD 872,048) with the remaining 20 percent (USD 218,012) sourced by Sightsavers. The objectives of the programme were:

- Detect and treat 1.5 million people for refractive error (adult population)
- To work towards raising eye health awareness amongst poor urban population of Mumbai – 10 million people
- To establish permanent, quality and affordable refractive error services through community based organizations and hospital partners
- To develop and strengthen human resources and capacities in Mumbai

The overall purpose of the evaluation is to understand the effectiveness of MECC and its approach in reducing avoidable blindness in Mumbai in the project catchment area, specifically as a result of uncorrected refractive error.

The Intervention:

The Mumbai Eye care Campaign was launched in 2009 and the funding ended in June 2014. The programme was implemented through two partners:

1. Lotus College of Optometry (LCO)
2. Khan Bahadur Haji Bachooali Eye and ENT hospital (KBHB)

Each partner worked with different Community Based Organizations (CBOs) to operate vision centres in the identified slums areas of Mumbai. KBHB operated 8 vision centres and the remaining vision centres were operated by LCO. These vision centres deployed community health workers (CHWs) to conduct screening tests in the target community located around the vision centres. Beneficiaries were referred to the vision centres, which operated typically once or twice a week, to undergo more detailed examination. Beneficiaries were provided spectacles at a nominal amount, to correct refractive errors. The patient detected with cataract or other eye-care problems were referred to the respective hospitals for treatment.

The partner hospitals provided training, human resource and administrative support to operate the vision centres while the CBOs who had a pre-existent community presence, provided basic infrastructure and implementation support.

The End Term Evaluation:

This evaluation aims to assess the MECC programme with respect to its set goals, national priorities and Sightsavers' priorities and also understand the enabling and disabling factors for its success. The study also assesses the sustainability of the programme and provides a way forward for enhancing it and making it scalable and replicable in future.

Both quantitative and qualitative methods were used for analysis of the programme. Interviews were conducted with Sightsavers' staff, partner hospitals, CBO heads, community health workers and community members (beneficiaries, non-beneficiaries and patients availing the service). Observation methodology was also used in the vision centres to assess the quality of the care. The target category wise sample size for the study is as follows:

- Sightsavers: Core Team (programme Manager, Management Information System-MIS expert)
- Partner Hospitals: Programme Coordinator of KBHB and LCO
- CBO: (3 CBO heads at the vision centre)
- 25 exit interviews of individuals visiting the vision centres for detailed examination
- 30 beneficiary interviews, of individuals who have been provided spectacles or low vision devices
- 30 community interviews, of individuals who have not yet availed services at the vision centres

Summary of Findings and Recommendations:

The study findings are categorized based on 7 key evaluation themes. Each of the themes has been presented as separate sections in the report. The key findings on

each of the themes and their respective ratings are illustrated in **Table 1** below. The rationale/ description of the evaluation criteria ratings below, has been illustrated in **Table 22** in Appendix A.

Table 1: Ratings for the evaluation criteria

Evaluation Criteria	Our Assessment/ Rating	Findings	Learnings/ Recommendations
Relevance	Satisfactory 	• The programme design, geography of operations and service mix was found to be most relevant to the local community. • The programme complimented the national eye health programme. • However, the programme's alignment to Sightsavers' strategy was poor.	• Widen the coverage to include clinically adjacent conditions including glaucoma, cataract and diabetic retinopathy. • Improve engagement with government agencies.
Effectiveness	Satisfactory 	• At a consolidated level, the MECC programme was able to achieve the targets set out except for IEC activities. • The partner hospitals, community health workers and operational processes acted as drivers to enhance efficiency. • However, low targets, faulty target measurement methodologies and lack of independent reviews were some of the challenges, which limited the overall effectiveness of the programme in generating community demand for services.	• Developing platforms for sharing of information and best practices among the stakeholders. • Conducting interim independent reviews of programme performance to realign the targets and improving processes based on learnings garnered through these reviews, can help improve capability of the programme to generate demand for services.
Efficiency	Satisfactory 	• With variations attributed to failure in achievement of targets and sporadically high spending, the programme activities were cost-efficient, when compared internally over the years. • The capital investments on equipment procurement were not efficient from a utilization perspective.	• Cost efficiency could have been improved by setting realistic targets and optimizing spends by initiatives like central procurement of spectacles. • Sharing of equipment across multiple vision centres can improve utilization efficiency and rationalize capital investments.

Impact	Satisfactory 	• The programme trained local personnel and built equipped vision centres in the community. 30% of the population was screened while 12% was tested for refractions. • The programme was able to increase revenue for their CBO and hospital partners along with catering to populations outside the service area	• The impact of the programme could be improved by incorporating suggestions provided in the sections of relevance (page 48), effectiveness (page 49) and efficiency (page 51).
Sustainability	Caution 	• The current programme design is not financially sustainable.	• The design of vision centres should be restructured to expanding services, extending to other eye care needs and improve procurement efficiency to build in financial sustainability.
Coherence/ Coordination	Caution 	• The coherence of the programme between the partner hospitals and Sightsavers was satisfactory. Engagement with government and district authorities was absent. • The coherence between the goals, approach, set targets, target measurement methodologies was completely lacking.	• The programme should engage better with the government and leverage public resources to optimize and avoid duplication of services. • Information sharing across the different stakeholder including CBOs and partner hospitals should be encouraged. • There was a need to set targets, define methods to measure, review and reset the targets and ensure that the data captured is coherent with the larger programme objectives.
Scalability/ Replicability	Satisfactory 	• The programme format was designed to be scalable/ replicable • The programme has simple operational processes and administrative protocols which can support scale up activities. • However, lack of partnerships with district authorities, financial constraints, lack of sustainable frameworks and limited human resources to support scalability could hamper scale up.	• Identify more partner organizations, share equipment and resources across locations, build in stronger processes for monitoring and train local personnel to help scale up the intervention.

1. Introduction and Background

1.1 Background

According to the World Health Organization, 285 million people are estimated to be visually impaired worldwide, with 90% residing in developing countries[2]. This led to the establishment, development, and creation of Vision 2020 (replaced by the Global Action Plan (GAP) in May 2013[3]), a global initiative between the International Agency for the Prevention of Blindness (IAPB), World Health Organization (WHO) and international member NGOs, professional associations and institutions. GAP targets to bring about 25 percent reduction in avoidable blindness and visual impairment, apart from raising awareness about it and its treatment.

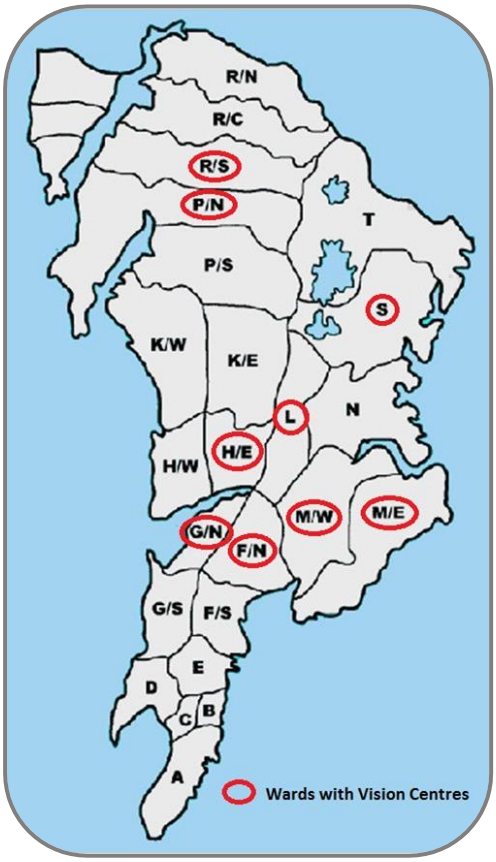
Standard Chartered Bank has launched the campaign 'Seeing is Believing' in collaboration with IAPB and other leading eye care NGOs, globally. India is one of the principal regions for the "Seeing is Believing" campaign as it has 23.5% of the world's blind population. Sightsavers has been a recipient of SiB funds since 2003.

1.2 Mumbai Eye Care Campaign

The Mumbai Eye Care Campaign (MECC), a part of the 'Seeing is Believing' (SiB) campaign, was designed to target those living in poor urban communities and slums of Mumbai. The programme targeted key stakeholder groups with a low socio-economic status such as rickshaw drivers, taxi drivers, construction workers and domestic workers.

Sightsavers is the principle implementer of the SiB programme through MECC, a Phase 4 project. It is responsible for the entire planning of the programme in terms of its monthly and quarterly plans, which are made in consultation with the partner organisations. Sightsavers also undertakes monitoring activities in terms of inputs, budgets, processes, quality and outputs, and coordinates the interim reviews, mid-term reviews and evaluations. Sightsavers is also responsible for advocacy of the programme with the government, especially the health department and local governance bodies.

Figure 1: Map of the project area



MECC: Goal

The overall goal of the programme was to contribute to reducing avoidable blindness in Mumbai, specifically targeting the growing problem of uncorrected refractive error. The indicators set to achieve the goal were:

a. Thirty five percent reduction in the prevalence of uncorrected refractive error in the programme geography
b. Twenty percent increase in people voluntarily accessing eye care services

MECC: The Programme Concept

The programme was conceptualized in alignment with Sightsavers' strategy and the National Programme for Control of Blindness (NPCB)[4] to ensure universal access to quality eye care services. The programme intended to deal with the growing problem of refractive error, by increasing the level of awareness in the community regarding the access and use of these services and improving the existing infrastructure to bolster provision of services for primary eye care needs of the community. **Figure 5** in Appendix A provides a high level view on how the programme is structured and conceptualized.

For the purpose of implementing the programme, partnership with two key eye care institutions in the city – K.B. Haji Bachooali Hospital and The Lotus College of Optometry, were structured. These partners along with local CBOs, established 15 vision centres over the duration of the programme. The partner hospitals were responsible for providing the technical staff and capabilities, while CBOs were expected to leverage their presence in the community to help implement the initiative. The partner organizations were also responsible for the capacity building of the CBO staff. These 15 vision centres deployed community health workers (CHWs) to conduct screening tests in the target community. Beneficiaries identified with refractive errors were referred to the vision centres, which operated once or twice a week, to undergo a more detailed eye examination and prescription of spectacles. Beneficiaries detected with cataract or other eye-care problems were referred to the respective hospitals for treatment.

The partner hospitals provided training, human resource and administrative support to operate the vision centres while the CBOs who had a pre-existent community presence, provided basic infrastructure and implementation support.

MECC: The Programme

The objectives of the MECC were:

1. Detect and treat 1.5 million people for refractive error (adult population)
2. To work towards raising eye health awareness amongst poor urban population of Mumbai – 10 million people

3. To establish permanent, quality and affordable refractive error services through community based organizations and hospital partners
4. To develop and strengthen human resources and capacities in Mumbai

As a part of the programme, active search of individuals requiring these services was done through door to door screening and primary eye care services (namely refractive error) were provided. Spectacles and low vision devices were provided to community members based on their requirement at nominal charges. These services were provided via the vision centres which were operational for one to two days per week. Additionally, individuals with eye-care disorders other than refractive errors were identified and referred to partner hospitals for treatment. While these treatments were not covered as a part of the programme, the programme played a critical role in the identification of patients needing specialized care.

The programme underwent some modifications after October 2013, over the course of its implementation, primarily due to concerns raised by donors regarding the sustainability of the vision centres, their high operational costs, and the fact that the desired outputs were being largely met by eye camps. The lack of a comprehensive demand-supply assessment for the conceptualization of the vision centres resulted in key changes, namely increase in the price of spectacles, restructuring of CBO partnerships and reduction in allocated human resource, to improve concept viability.

1.3 The Need for Evaluation: Rationale and Objectives

The overall purpose of the evaluation is to understand the effectiveness of MECC and its approach in reducing avoidable blindness in Mumbai in the project catchment area, specifically as a result of uncorrected refractive error. Additionally, the evaluation attempts to understand the scale of impact and document some of the best practices and learnings. This, in principle, will help in developing more robust frameworks for similar implementations going forward.

An independent review has been commissioned by Sightsavers, with focus on evaluating the extent of success that the programme has achieved across some of the key parameters.

1.4 Aim of the Evaluation

The overall purpose of the evaluation is to understand the performance of MECC and its success in creating awareness and providing eye care services to reduce avoidable blindness, attributed to uncorrected refractive errors in the selected catchment areas of Mumbai.

2. Detailed Approach and Methodology

The approach and methodology was designed to review the overall success of the Mumbai Eye Care Campaign with respect to its overall performance and impact on the community. The explanatory research design proposed for this evaluation study was clearly split into two separate phases,

2.1 Secondary Data Collection and Analysis

This phase focused on collating secondary data across,

a. Literature review of population based studies conducted across India in similar communities
b. Review of the programme documents (over its duration of five years) in terms of performance across key metrics namely monthly and annual reports, budgets, log frame, financial data etc. Each of these data points assisted in specific analysis, though standardized data over the entire duration was not available.

2.2 Primary Data Collection and Analysis

A semi-structured questionnaire was used to collect information from the respondents. This allowed the evaluators to gather relevant information based on the profile of the respondents. The identified stakeholder groups for discussions included,

1. CBOs implementing the programme
2. Partner Hospitals acting as technical experts
3. Programme Staff supporting the implementation
4. Community members or target beneficiaries

2.3 Sampling Technique

A multi-stage sampling methodology was used for selecting the samples for interviewing people from the target community, programme staff and community based organizations.

Stage 1: Selection of the vision centres (Refer to Table 4 and Table 5 in Appendix A)

Three vision centres were selected using a rank based randomization technique as detailed below. This was done to ensure that the evaluation of the performance of the programme was unbiased.

i. The performances of all the 15 vision centres, on four key parameters, for randomly selected 3 one month periods, over the last 12 months were collated.
ii. A simple arithmetic average of the randomly selected three months was computed, for each of the four parameters, across all 15 vision centres.
iii. Based on the simple arithmetic average, all 15 vision centres were ranked on a scale of 1-15 (1 meaning lowest value of the average and 15 meaning highest

value of the average) for each of the parameters. This was referred to as 'parameter ranks'. **Table 4** in Appendix A provides the view of the parameters analyzed.

iv. As the data points are ordinal in nature, for each vision centre, the *"median score"* was calculated based on the rank achieved for each individual parameter. The vision centres were then ranked again based on the median score.

v. Post arranging the vision centres in a descending order based on the Vision Centre Rank, the top five constituted high performing while the bottom five constituted low performing units. One vision centre was selected for the study from each of the three categories, i.e. High performing, Medium performing and Low performing, as indicated in **Table 5** in Appendix A.

Stage 2: Selection of stakeholders for the interviews based on vision centres chosen (Refer **Table 6** in Appendix A)

The following stakeholders were interviewed in each of the selected vision centres:

1) **Interviews with CBOs operating the vision centres:** Key people from 3 CBOs operating the vision centres selected, were interviewed.
2) **Interviews with Programme Staff:** One staff member (optometrists) each from the 3 vision centres selected as above was interviewed. One community outreach staff (health worker) from each vision centre was interviewed and observed during the process of providing service.
3) **Community interviews survey:** A total of **85 respondents** were interviewed from the community to determine the level of impact created by the programme on the beneficiaries. Three sub-categories were identified,
    a) **Beneficiaries from the community:** This included individuals who had sought eye care services over the course of programme duration, i.e. March 2009 – June 2014. A total of **30 respondents** under this category were selected for the interview.
    b) **Exit Interviews with patients in the Vision Centre:** Random sampling was used here where **25 respondents** across the 3 vision centres selected above were interviewed.
    c) **Non-beneficiaries from the community: 30 respondents** from the community who had never used eye care services through this programme were interviewed.
4) **Interviews with Partner Hospitals:** Programme Coordinators from each of the two partners were interviewed.

2.4 Analysis of Information

The analysis framework consisted of internationally accepted evaluation criteria of the Organization for Economic Co-operation and Development– Development Assistance Committee (OECD-DAC) for addressing the evaluation questions and assessing whether the programme was relevant, efficient and effective, and whether it had a positive, sustainable impact (OECD-DAC, 2002)[5]. Additionally, Sightsavers' evaluation criteria, namely replicability/ scalability and coherence were also assessed as discussed in **Table 7** in Appendix A.

2.5 Limitations of the Study

While the approach and methodology of the study was adequately designed to address the constraints and ensure a complete and comprehensive evaluation, there were certain limitations encountered, although measures were taken to ensure minimization of impact of these limitations on the overall assessment.

1. The MECC was implemented over a period of 5 years. During this period, the programme underwent some changes in terms of the format of implementation/ operation, partners, geographical coverage, etc. While relevant data insights were available, the comparability was an issue and approximation techniques were applied to make comparisons.
2. Prior to the implementation of the programme, no detailed baseline assessment was conducted. Most of the output indicators documented in the logframe were structured to measure the percentage change brought about by the programme. In absence of a baseline, these output indicators could not be accurately measured. The methodological design has taken this into consideration and attempted to develop alternatives to measure the impact. However, the proxies largely depended on the available literature.
3. The programme related information collected by Sightsavers was restricted to specific data sets which included awareness, screening, refraction, spectacles prescribed, etc. Neither Sightsavers nor the partner organizations maintained comprehensive information pertaining to referred patients, treatments provided, diagnostic tests done, surgical procedures performed on the referred patients, etc. This limited the evaluation of the wider impact created by the programme.
4. The data managed by both the partner organizations was in different formats and thus comparing the data was an issue. The common indicators had to be screened out and some approximation was required for the analysis.
5. The financial data available did not contain activity wise expenditure and thus approximation techniques were used for calculating effectiveness and efficiency of the programme with respect to the money spent.

6. Capturing a large sample was difficult due to scarcity of the time. The figures for number of people reached through IEC was based on the programme MIS. It was difficult to assess the numerical authenticity of the data and thus qualitative insights were also integrated.
7. There was minimal co-ordination with the Government authorities during the programme and thus no Government officials were consulted for interview, though it was suggested initially.
8. The vision centres operated once a week and thus the team had to wait for the vision centres to open for conducting the exit interviews and this led to increase in field work days. Also, there was a sample shortfall of 5 patients as only 5 patients came to the vision centre that day and revisiting would have delayed the study.

3. Evaluation Results

This section attempts to provide detailed insights into the overall performance of the programme based on the OECD-DAC evaluation criteria along with additional Sightsavers' criteria. The various findings garnered through secondary and primary assessment along with the recommendations have been included in this section.

3.1 Relevance

Evaluation of the relevance of the MECC programme was aimed at understanding the alignment of the design, coverage, service mix and operating structure of the programme with the needs and requirements of the target community, regional and national eye health priorities, and with the donor and partner organizations' strategies. This section attempts to verify if the intervention was designed on sound logic and rationale. The critical questions this section attempts to answer include,

A) Was there a need to provide eye care services in the target geographies and communities?

B) Was the programme's focus on provision of refractive error services relevant, in context to regional and local priorities?

C) Was the focus of the MECC programme on adult population relevant?

D) Was the programme design appropriate for the community's need for refractive services?

E) Was the programme aligned with the national eye health priorities?

F) Was the programme aligned with Sightsavers' strategic priorities?

A) Was there a need to provide eye care services in the target geographies and communities?

The MECC programme operated 15 vision centres in 9 wards with lower than average Human Development Indices (HDI)[6] for the city and cumulatively covered ~61% of the total slum population of the city. Additionally, the nine wards covered had an average of one public facility per 331,736 slum population compared to the city's average of one public facility per 161,886 slum population, indicating a clear supply demand mismatch[3].

The evaluators during their discussions with the CBO representatives found that majority of the population in the wards were daily wages workers, for whom private facilities are beyond financial means and visit to a government hospital would lead to loss of wage.

"… I work as a domestic help and cannot take time out to visit a hospital. The vision centre is close to my house and as soon as I had a chance, I came to get my eyes checked…" **– Patient, Female / 37 years**

Additionally, interviews with community members showed that 92% of the respondents (n=55) were daily wages workers or non-working adults, as indicated in **Figure 6** in Appendix A. For this section of society, affordability to purchase spectacles costing INR 120 (USD 2)[i] is a major constraint and can be significant expenditure, if not catastrophic[ii].

For senior citizens, the ability to travel distances to visit a hospital was limited, due to physical reasons, making availability of services within the community critical.

The MECC was thus very relevant in targeting the adult population (including senior citizens) residing in the Mumbai slums, through provision of free/ subsidized spectacles and establishment of vision centers within the community.

'… I used to have a vision problem but I always thought it was because of my old age. My son brought me here and the doctor gave me spectacles. I can never forget the day I could see properly again. I can do my daily chores without assistance now…' **– Community user, Female / 64 years**

B) Was the programme's focus on provision of refractive error services relevant, in context to regional and local priorities?

According to the National Programme for Control of Blindness (NPCB), cataract and refractive error are the top two contributors to blindness in India. From a national perspective, under the NPCB, cataract and refractive errors are primary focus areas for the government. The government budget for the 12th Five Year Plan indicates a spend of USD 246 million for cataract against USD 22 million on refractive error screening and spectacle distribution (refer **Table 8** in Appendix A). Various studies have reiterated that the government has a strong focus on conducting cataract surgeries and school screening programmes[7].

The MECC programme design complemented the government's efforts by providing basic refractive error services, especially for the underserved populations. By strengthening local capabilities to detect refractive errors and identify cataract cases, the programme helped leverage existing government initiatives and avoided duplication of services[8]. Further, the programme complemented the government's initiative by focusing on the adult population for refractive errors.

[i] The conversion rate is taken as USD 1 = INR 60 throughout the document

[ii] Catostropic expenditure is when a household's contribution to the health system exceed 40% of the income remaining after subsistence needs are met

C) Was the focus of the MECC programme on adult population relevant?

Studies conducted by Dandona et al.[9] and Krishnaiah et al[10] suggest that prevalence of refractive error among adults is significantly high. During the discussions with CBO staff, it was revealed that an estimated 10-20% of children and 30-50% of adults suffer from refractive errors. Prevalence among senior citizens was pegged higher at 50-90%.

Secondary data suggests that the national programme adequately covers refractive services among children. Performance of the School Eye Screening (SES) initiative under the national programme, suggests that about 19,182,853 school children have been screened for refractive error which contribute to ~93% of total school going population in the state (refer **Table 21** in Appendix A).

Unfortunately, a comprehensive large scale programme to address refractive eye care needs of adults and the elderly is currently absent in the country. Analysis of the community user's interviews showed that the MECC programme services were largely used by adults. 56% of the community members interviewed at the vision centres were adults (18-60 years) and an additional 40% were senior citizens (above 60 years). This secondary and primary data analysis re-validates the rationale of the focus of the MECC programme on adults and refractive eye care services.

D) Was the programme design appropriate for the community's need of refractive error?

The design of the programme aimed at increasing awareness, establishing permanent quality and affordable refractive error services, and providing access to these services. Evidence from other studies conducted on similar target communities (Ghatak, et al[11] and Dandona, et al[12]) have concluded that focusing on awareness and provision of free spectacles is essential to generate demand and improve the health seeking behavior in the community.

Secondary data shows that the average daily wages of casual worker in urban Maharashtra is ~INR 150 (USD 2.5)[13]. The evaluators noted, during their interactions with CBOs, that seeking refractive services and purchasing spectacles at market rates could cost anywhere between INR 600 (USD 10) to INR 1000 (USD 16.7), which was way beyond the means of most of the target communities. The design of the programme to provide eye care services at affordable prices was hence valid and critical. Further, studies have indicated that availing healthcare services, especially by daily wages workers, leads to wage-loss, which can be as high as INR 259 (USD 4.3) per day[14]. Making services accessible through establishment of permanent and quality services within the community was equally critical.

E) Was the MECC programme aligned to national eye care goals?

The MECC programme was conceptualized in 2008 and hence its alignment to the priorities for the National Programme for Control of Blindness under the 11th Five year plan (2007-12)[15] was evaluated. It is worthwhile to note that MECC as a programme focused only on refractive errors while the national programme focused on a wide range of services including cataract and other eye care needs.

Objectives of the National Programme for Control of Blindness (11th Five Year Plan):

- To reduce the backlog of blindness by identifying and providing appropriate eye care services
- To develop comprehensive eye care facilities in every district
- To expand coverage of eye care services to the underserved areas
- To provide high quality eye care services to the affected population
- To enhance community awareness on eye care
- To develop capacity of institutional and health personnel

a. The primary goal of the NPCB was to reduce the backlog of blindness by identifying and providing appropriate eye care services. The MECC programme by way of its door to door screening and provision of eye check-up services contributed in improving detection of refractive errors. The programme concept however was not restrictive to providing spectacles to beneficiaries with refractive error, but ensured that those with more complex requirements were referred to partner hospital facilities to seek appropriate care.

b. The NPCB clearly identified the inadequacy of infrastructure and invested on development of comprehensive eye care facilities and expanded coverage to underserved geographies. The MECC conceptualized the vision centres in Mumbai slums, which had lower infrastructure to population ratios (refer **Table 12** in Appendix A). These vision centres were designed to provide primary eye care services. In their effort to strengthen eye care infrastructure and increase coverage, the MECC not only provided basic equipment to partners operating the vision centres but also provided a mobile van to one of the partners.

c. Provision of quality services and developing capabilities at institutional and human resource levels was another critical objective identified by the NPCB to strengthen eye care services. The MECC did not directly focus on building capabilities or improving service quality, but depended on the implementation partner hospitals to train resources and ensure quality. The monitoring mechanisms were largely focused on performance reviews and the focus on quality was poor.

d. Finally, as a measure to increase utilization of services by the community, the NPCB identified enhancing awareness to eye care services as a critical objective. The MECC also laid special emphasis on community awareness. The evaluators however observed a lack of well-defined methodology to measure the reach of awareness. Additionally, programme data indicated that IEC reach was minimal during the initial half of the programme duration (i.e. 2009-2011) and were increased significantly in the second half. Also IEC reach did not have any direct bearing to the other components of MECC, i.e. increase in IEC did not result in increased screenings, refractions or dispensing of spectacles. Hence, despite its programmatic and conceptual alignment to enhancing awareness, the programme clearly lacked operational alignment to this objective.

F) Was the MECC programme aligned with Sightsavers' strategy?

Sightsavers strategic framework 2012-18 (depicted in **Figure 18** in Appendix A) states that avoidable blindness is best addressed when health systems are aligned with government policies, and health programmes support and strengthen national health systems. In particular, it focuses on demonstrating eye health approaches that are scalable, adaptable and cost-effective, and can strengthen the overall health system, to ensure that good quality eye care is universally available to the wider health system[16].

Ultimate Aim: Governments ensure quality eye care is universally available as an integral part of the wider health systems.

The MECC programme is centered on the delivery of quality refractive eye care services. Our assessment is that the project is broadly in line with Sightsavers strategic mandate. The programme partnered with CBOs and service providers to provide quality and cost effective eye care services. However, discussions with programme staff revealed that there was limited engagement with the government/ local authorities. This limited the integration of the programme within the wider health system and also hampered its scalability. Some of the specific concerns of the programme's design in context to Sightsavers strategy were,

a. The vision centres were conceptualized, as a part of the programme design, to improve access to refractive error services. The vision centres were however not adequately rationalized, leading to draining of financial resources, without being able to generate adequate demand for services. The failure to generate 'adequate' demand for services has led to concerns around the sustainability of the programme in the long run. The programme design should have looked at

possible options for leveraging and strengthening existing infrastructure, rather than creating new infrastructure (vision centres).

b. The programme was able to develop effective partnerships with CBOs and partner hospitals to deliver the programme, however engagement of the government remained fairly low. Discussion with programme staff suggested that while engagement with government was planned as a part of the initiative, however limited interest on the part of local authorities could have been a reason for poor government engagement. Improved engagement with the government bodies like Municipal Corporation of Greater Mumbai and Maharashtra State Blindness Control Society, could have supported scale up of the programme by allowing leveraging infrastructure/ resources available within the public health system. Additionally, it could have created opportunities for advocacy and health system integration of basic eye care services.

c. The programme also failed to build area level teams, which would be critical to deliver similar programmes going forward. Leveraging the existing cordial relationship with partner organizations and developing area teams comprising of clinicians, developmental sector experts, government partners and management experts would have improved local capabilities to advocate, develop and implement programmes focused on eye care services.

Relevance	***Assessment:*** **Satisfactory**	

The MECC programme focused on the communities that needed these services and concentrated its efforts in geographies that were underserved. Additionally, the programme's focus on creating awareness and providing primary eye care services complemented the national strategy on blindness on providing universal access to quality eye care services.

However, the programme's alignment to Sightsavers strategy was not comprehensive. Inadequately rationalized project design, lower engagement with government agencies and limited focus on building local teams were some of the areas of concern. Additionally, the evaluators during their assessment noted that an approach dealing with the problem of refractive errors, along with other clinical co-morbidities like glaucoma, cataract and diabetic retinopathy, would have helped make the programme more relevant for the target communities (i.e. adults),since this age group tends to have higher prevalence of these comorbidities compared to other population groups. Additionally, a wider focused programme could have provided opportunities to bolster the linkages with government and other institutions.

3.2 Effectiveness

Effectiveness of the MECC can be judged by its performance as compared to the targets set for the programme. The programme's effectiveness was evaluated based on the project MIS and was triangulated by the evaluators based on the interactions with the various stakeholders. This section also attempts to explore and highlight the underlying factors which might have acted as a trigger or barrier to the success of the programme. It will address the following key questions:

A) Has the programme been able to achieve the outputs and activities that were set during the programme period?

B) What have been the major factors affecting achievement and non-achievement of the programme objectives?

C) Has the programme been effective in improving systems and processes and contributed to any increase in community demand towards eye care services?

D) How effective were the human resources for the programme, especially at the vision centres, in providing services to the patients?

A) Has the programme been able to achieve the outputs and activities that were set during the programme period?

For the purpose of the evaluation, the evaluator has identified and selected four key performance indicators from the programme logframe, based on their critical relevance to the programme performance, availability of information and the ability to subsequently measure their efficiency. These have been presented in **Figure 7** in Appendix A.

a. No. of people reached through IEC material: At the start of the programme, an annual target to reach 400,000 individuals through IEC material was set. The MECC programme failed to meet these targets during the period of 2009-13, which resulted in upward revision of the target to 713,424 in 2013-14. The evaluators, during their discussions with partners and CBOs, noted that the failure to achieve targets during the initial years was attributed to diversion of focus to conducting camp related activities rather than distribution of communication material. Despite the programme achieving and exceeding the IEC targets from 2012-14, its implication on other performance indicators was negligible. The evaluators noted that the lack of focus on IEC during the initial part and ad hoc increase in IEC coverage during the latter part of the intervention, lead to misalignment between IEC activity and the other activities of the programme, making it ineffective.

b. No. of people screened: An annual target of screening 200,000 individuals was set at the start of the MECC programme. The programme managed to exceed the

targets during the period of 2009-13, which lead to a downward revision of targets of 2013-14, which were also achieved. This activity was highly effective given the gradual increase in the number of people screened from 2009-2013.

c. **No. of people refracted:** An annual target of 30,000 refractions per year was set at the start of the programme, which was revised to 44,250 refractions for 2013-14. Higher refractions per year compared to the set targets were achieved during 2010-13. As per assessment of data from one of the partners, during this period, ~23% of refractions were conducted in camps and mobile vans. The evaluators observed that since all the individuals visiting the camps were refracted, the contribution of camp refractions was relatively higher, unlike the vision centres where only patients requiring refractions were referred. The evaluators believe that the consolidated reporting of refractions for both vision centres and camps was not an accurate way to measure programme targets. Since the vision centres were primarily designed to provide refractive services, a consolidated view failed to provide 'real' insights into footfalls (and sustainability) to the vision centres.

d. **No. of spectacles dispensed:** An annual target of 12,000 spectacles to be dispensed each year was set; however from 2010 to 2014, these targets were over achieved. The evaluators, during their discussions observed that the set targets were too modest given the scale of refractive errors among the community. As per discussions with CBOs, the MECC programme provided significant subsidizes, higher than any other NGO/ facility operating in the region (e.g. Lion's Club), which also contributed to the higher demand and dispensing rate.

With regards to the financial effectiveness, the budgetary allocations and expense spending were reviewed. The programme cost was broadly categorized into six headings as depicted in **Table 13** in Appendix A.

While most of the budgetary spend showed minimal variance through the project duration, two of the allocation headings showed significant variances:

a. **M&E Costs:** The M&E component was highly underutilized. Despite allocations for conducting a baseline study, the study was not planned since the partner hospitals were convinced about the relevance and didn't consider a baseline relevant to establish a business case.
b. **Other programme activity cost (including IEC):** Sightsavers project coordinator in her discussion with the evaluators cited that higher funds were spent on IEC activities due to availability of unutilized funds. The evaluators clearly observed a lack of rationale in increasing spending on IEC activities towards the latter half of the programme.

"…We had significant funding available at the end of the programme which we used for our IEC activities to spread awareness in the community…" – **Sightsavers' Programme Coordinator**

B) What have been the major factors affecting achievement and non-achievement of the programme objectives?

There are various factors which have directly or indirectly affected the achievement of the programme goals. The key factors which have played an enabling role are as follows:

a. **Institutionalization of the Vision Centres:** During interactions with the community, it was observed that the vision centres helped improve access to eye care services. With most of the patients being daily wages workers, it was easier for them to use these services, instead of public facilities which often resulted in tangible loss of wages. Additionally, with a relatively fixed schedule of operations, the vision centres become more convenient for senior citizens and housewives, who could accordingly schedule their visits after completing their domestic chores.

b. **Leveraging CBOs with local presence:** Interactions with the partner hospitals revealed that the programme engaged with CBOs that had been operating in the target geographies for several years prior to 2009. These CBOs had a better understanding of the community in terms of demographics, health concerns and issues. Additionally, the CBOs had built a certain amount of credibility in the community, through their years of functioning. Partnering with the CBOs, gave the programme a strong start and better acceptability.

c. **Partner hospitals:** The two partner hospitals KBHB and LCO made a critical contribution to the achievements of the programme. LCO, linked with the Lotus Eye Hospital, was able to provide low cost trainee optometrists to operate the vision centers. Additionally, both partner hospitals provided training to almost 350 community health workers during the duration of the programme, through one day training workshops. Additionally, the programme also benefited from operational and clinical process experience of the partner hospitals.

d. **Comprehensive eye care:** The programme was focused on refractive errors, but was not restricted to it. The partner organizations used the infrastructure to provide additional primary eye care services for cataract and glaucoma (though not within the scope of MECC). The evaluators observed that this helped in improving the visibility of the vision centres. However, since the additional services were not a part of the core programme, they had limited focus and the potential to offer these services to the community was not fully exploited.

e. **Two tier patient identification process:** One of the critical focus areas of MECC was to improve identification and detection of patients with refractive

errors. The programme design followed a two tier patient identification process, whereby the community health workers screened the patients in the community and patients identified with refractive errors were referred to the vision centre for further evaluation. This two tier identification process potentially helped in enhancing awareness and also ensured that those reaching the vision centres needed those services, thus optimizing the utilization of the vision centre resources and avoiding undue wastage.

f. **Good reach of the Community Health Workers:** The community health workers have played a very positive role in influencing programme outcomes. Like any other public health programme, community health workers have acted as a catalyst by instilling confidence and change among the community members. During their discussions with the community, the evaluators observed that the community recognized the programme through the health workers. The health workers not only acted as 'brand ambassadors' of the programme but also worked towards changing the community's health seeking behavior by improving acceptance to the programme.

"… The Community Health Worker is my friend and told me to come here to get my eyes checked. Everyone in my locality knows her as the Eye Lady…" – **Patient, Female / 32 years**

The MECC also faced various challenges during its implementation which can be categorized into the following:

a. **Inability to retain health workers:** Mumbai being a metropolitan city has multiple avenues of employment, which made it difficult to retain community workers and programme staff. The evaluators observed that the remuneration provided was low, even when compared to the community's earning standards[iii]. While the staff was hired as part time workers, their inability to secure other part time jobs, constrained their ability to generate income. This made it difficult to retain the trained health worker for longer period[iv], leading to loss in effectiveness. Each time, new people were hired and trained and this led to additional training costs and hampering of the relationship developed by the health worker with the community.

"… A lot of Community Health Workers leave the job in months if they get a higher paying job elsewhere. Retaining them is a major problem for us…" – **CBO**

[iii] Each health worker was paid INR 2000, which was lower than what a casual laborer would make in the community.
[iv] The exact duration of employment of programme staff is not known, this is based on primary discussions with CBO and programme staff.

b. **Poor systems and inconsistent reporting:** The CBOs did not have strong systems and processes, despite the strong technical and managerial capabilities of the partner hospitals. The evaluators found inconsistencies in the reported MIS with a few data points missing in the reports shared by one of the partner organizations. Despite standard reporting formats being shared with the partner hospitals, the data was not captured as required. The evaluators noted that there was significant scope for improving the reporting formats to capture data, not restrictive to performance but including data related to quality; e.g. the project MIS captured information around the number of patients referred from the vision centres to the partner facilities, but data on actual patient reporting was not captured by one of the partners. Additionally, data on referral cases could have further helped in improving relevance of the vision centres by incorporating services around conditions that lead to frequent referrals and thus reduce dropouts.

c. **No clear strategy towards IEC activities:** IEC activities were an integral part of the programme and were aimed at creating awareness to improve utilization of the conceptualized vision centres. Unfortunately, IEC activities were poorly conducted during 2009-11. The evaluators observed that merely 20% of the interviewed community members (n=30) had seen or were aware of the IEC material. Further, the way in which IEC reach was measured was highly questionable. Based on the discussions with partner organizations, it was observed that for every IEC material/ pamphlet distributed it was assumed that an entire family of four community members were made aware. Similar assumptions were made for banners or television advertisements broadcasted. The evaluators observed that the reach estimation technique was flawed and clearly did not create an increase in utilization of the services, despite high coverage during the latter part of the programme.

d. **Poor conceptualization of the vision centres:** In principle, the vision centres were conceptualized to increase access and make services available within the community. However, in order for the vision centres to operate sustainably and contribute to improve access, it was imperative that the vision centre design have a direct link with the targets set for IEC, screening and refractions. The evaluators observed a clear mismatch. A vision centre operating for twice a week should have been able to refract ~300 individuals per month with all the 15 vision centres contributing to ~50,000 refractions annually[v]. However, the target was set much lower at 30,000 per annum, of which almost 20% was actually achieved through camps and other outreach activities.

[v] Assuming each vision centre is operational 6 hours a day and 6 patients are refracted per hour in each vision centre.

e. **Lack of a baseline or midterm evaluation to compare:** Establishing a baseline for assessing the current situation and setting realistic targets is extremely important as it provides a strong base for efficient monitoring. It was observed that in the absence of a baseline, the targets for various activities were set on an ad-hoc basis. A base line could have provided a more realistic picture of the number of potential refractions that would be required and hence helped in defining the specific targets for the vision centres. In the absence of a baseline, an ad-hoc target of 30,000 refractions per annum was set for all vision centres, put together, which were expected to cater to a population of more than 3 million. Further, the absence of a midterm evaluation resulted in an inability to revise the targets, despite efforts made around conceptualization of vision centres to improve sustainability. Additionally, the lack of a baseline study made a host of programme logframe indicators redundant, despite the conceptual relevance to the programme. E.g. 20% increase in people receiving refractive error and low vision services could not be evaluated in absence of the knowledge of the pre-programme utilization rates.

f. **Lack of sharing of learnings between the two partners:** There was a difference between the performances of the partner organizations with minimal knowledge sharing practices. LCO was able to procure spectacles at much lower rates compared to KBHB. Interactions between the two partners could have helped standardize the quality of dispensed spectacles and improve procurement efficiencies. KBHB vision centres performed significantly better in terms of footfalls and their strategy could have been efficiently used by the other partner[vi].

g. **Partner dependent monitoring frameworks**: Partner organizations were important stakeholders; however it was imperative that the MECC programme team monitored the programme progress on the ground independently. During discussion with Sightsavers officials, it was observed that in most cases the role of the Sightsavers team was restricted to compiling MIS from the partner hospitals. The field supervisors (a position created to monitor field activities) were recruited and employed by partner organizations to simplify their reporting. The evaluators noted that this limited Sightsavers team to conduct an independent review of authenticity of the information provided by the partners.

C) Has the programme been effective in improving systems and processes and contributed to any increase in community demand towards eye care services?

In primary discussions with CBO partners, it was cited that during the initial years, a relatively high percentage of patients were referred to the vision centres by the

[vi] Data considered is an average for the period Nov 13 – Mar 14 for LCO and Jan 14 – Jun 14 for KBHB

community health workers. As the awareness about the programme increased, this distribution changed with more patient walking into the vision centres directly. An analysis of the community interviews conducted at the vision centre (n=25) indicated that about 64 percent of the patients were walk-ins, which validated the shifting trend. The evaluators however observed that the change in trend was not actually due to increased demand, but due to the reduction in the number of community health workers (from 2011-2014), as fewer health workers meant fewer referrals which in turn increased the share of direct walk-ins into the vision centres. This is depicted in the **Figure 9** in Appendix A.

"… Earlier majority of the patients in vision centres were those screened by the CHW and very few were walk-in patients. This has now reversed…" **– Programme Manager of one of the partners**

D) How effective were the human resources for the programme especially at the vision centres, in providing services to the patients?

The effectiveness of the human resources (vision centre staff excluding health workers) was assessed based on the feedback received during the beneficiary interviews (refer **Figure 11** in Appendix A, n=55). The evaluator observed that most beneficiaries were satisfied with the performance of the staff and confirmed the staff is efficient, well trained, paid proper attention to their needs, shared all the relevant information and were cordial and respectful.

However, a few respondents raised concern over the timeliness of services, as indicated in **Figure 8** in Appendix A. The evaluators observed that patients took about 30-45 minutes at the vision centre, including the waiting time, for their screening. The evaluators, during more detailed discussions with the beneficiaries, noted that high waiting times hampered the perception of the vision centres, staff effectiveness and also lead to equating the services provided by the vision centre to those of sub optimally managed public hospitals. The evaluators strongly believe that this could act as a deterrent to utilization of the services. The vision centres may consider using patient scheduling techniques, workflow optimization techniques, etc. which could contribute to better turnaround time and boost overall satisfaction levels.

Effectiveness	***Assessment:* Satisfactory**	

At a broad level the MECC programme was able to achieve the targets set out except for achievement in targets for IEC activities. The key drivers that positively contributed

to the effective implementation of the programme included the partnerships established with CBOs and partner hospitals. Additionally, inclusion of components like employing community health workers from within the community, providing a wider range of services (not restrictive to refractive error services) and proven patient identification, and detection processes within the programme design, strengthened the effectiveness.

Despite being operationally efficient, the programme had certain obvious limitations. It was observed that the targets set for the different activities were too low and lacked correlation. The overtly high focus on achievement of targets overlooked the faulty target measurement methodologies, logic of setting new targets and verification of MIS received from the partner hospitals. Lack of sharing learning between the two partners, absence of a baseline study and inadequate rationalization of the vision centres impacted effectiveness of the intervention as a whole.

The evaluators observed that developing knowledge sharing platforms to share information and best practices among the stakeholders and conducting independent review of the functioning of the programme could have helped bolster the effectiveness of the intervention. The independent programmatic reviews, during the tenure of the programme, would have helped in improving the reporting formats and structures, rationalized the concept of the vision centres and improved accountability and process standardization.

3.3 Efficiency

The efficiency of the programme has been assessed on two parameters – financial efficiency of programmatic activities, and financial efficiency of investment in equipment infrastructure. For this evaluation, the programme's physical and financial data was triangulated with primary discussions to answer the questions around efficiency. The evaluators were faced with limitations in their assessment primarily due to inconsistent and missing data, lack of baseline and limited primary discussion insights from those who were not engaged in the programme from its conceptualization. The efficiency section intends to answer three basic questions:

A) How well has the programme been implemented in terms of ensuring cost efficiency for the various key activities? What were the critical considerations that impacted efficiency of the intervention?

B) Has the infrastructure and the equipment been sufficient and efficient in contributing to achieving the desired results?

A) How well has the programme been implemented in terms of ensuring cost efficiency for the various key activities? What were the critical considerations that impacted efficiency of the intervention?

While evaluating the cost efficiency of the programme, there were three specific considerations,

a. The yearly programme data of the budgeted and actual spending from the monitoring template were used for computing cost-efficiencies. Since this information was available in USD, cost efficiency has been evaluated against USD.
b. Indian economy underwent significant turmoil during this time frame from 2009-2014 resulting in rapid devaluation of the Indian rupee from INR 49 per USD in 2009 to INR 61 per USD in 2013.
c. Internal benchmarks were used for comparisons of spend per unit and associated challenges were identified during the programme duration.

The key activities of the MECC programme which were assessed for cost efficiency are as follows:

IEC campaign: IEC aimed at increasing the level of awareness and changing the health seeking behavior of the community by conducting street plays, broadcasting advertisements on local cable channels, displaying banners, and distributing pamphlet and posters at strategic points. Cost efficiency of IEC was evaluated based on annual spending under the "other programme activity cost" category and the estimated number of people reached was evaluated.

The analysis from **Figure 10** in Appendix A provided two critical insights,

a. IEC spend per person reached was most efficient towards the end of the programme. The evaluators believe that this was attributed to relatively lower coverage during the initial phases and ~25% devaluation of the Indian currency, resulting in 'apparent' cost efficiency.
b. The activity was least cost inefficient in 2011-12 primarily due to very low number of people reached, which was attributed to limited focus on IEC activities during this phase (refer Effectiveness section). The analysis indicates that no. of people reached is directly linked to cost efficiency, i.e. the higher the number of people reached through IEC, the more cost efficient the IEC activities are.

Refraction and Screening Activity: Screening activity was focused at increasing footfalls to the vision centre and enhancing the number of refractions. Hence it is imperative that these two activities are evaluated concurrently to understand their cost-

efficiency. While estimating the cost efficiency of these two activities, the direct costs associated with these activities, namely organizational cost and partner support costs were assumed.

The analysis of the information as depicted in **Figure 13** in Appendix A, provided critical insights with reference to cost efficiency,

a. The dollar spent per refraction is inversely related to the number of refractions, i.e. the more the number of refractions, the lower the dollar spent per refraction. The spending was lower during 2010-11 (1.43 USD per refraction) and increased in 2013-14 (2.50 USD per refraction), as the number of refractions reduced.
b. The numbers of screenings and refractions were directly proportional from 2009 to 2013. However, despite a significant drop in screenings in 2013-14, a proportional drop in refractions was not observed. The screening to refraction conversion was higher in 2013-14 than the previous year (3.37:1 in 2013-14 as against 7.48:1 in 2012-13). The evaluators believe that this could be attributed to the decision of the programme team to reduce the number of community health workers, which lead to a concurrent increase in the number of walk-in patients.

Number of spectacles dispensed: Distributing spectacles was an integral part of the MECC programme. Initially spectacles were provided free of cost (with minimal user charges). Subsequently, however concerns were raised by the donor regarding financial sustainability of the vision centres. The programme team consequently decided to increase the price of spectacles in 2012-13 to bring in sustainability. Hence, in order to evaluate cost efficiency of spectacles distributed, the ratio of amount spent on spectacles to number of spectacles distributed was evaluated, in two parts:

a. **From 2009-2012, when the spectacles were provided at nominal charges:** Cost-efficiency improved during the third year (USD 4.11 per spectacle for 21605 spectacles) which was attributed to higher volume of spectacles ordered compared to the first year (USD 4.70 per spectacle for 8512 spectacles). The spike in 2010 was attributed to high spend under care and maintenance heading[vii].
b. **From 2012-2014, when spectacle charges were increased:** Subsequently, the cost-efficiency (from the donor's perspective) improved for per spectacle dispensed, which was attributed to increase in the user charges and currency devaluation.

The cost efficiency of spectacles distributed is represented by **Figure 12** in Appendix A.

[vii] In 2010, a significantly high spend was made on care and maintenance sub-heading, under the organizational cost heading. This contributed to ~47% of the expense under this sub-heading in 2010 (and 75% of the total expenditure under the sub-heading, throughout the programme duration).

B) Has the infrastructure and the equipment procured during the course of the programme been used efficiently in contributing to achieving the desired results?

A significant expenditure of the programme was made on procuring capital equipment for the various vision centres. As per the budgeting template, USD 140,038 (~13% of the total budgetary outlay of the programme) was spent on procurement of equipment, which were to be stationed at the vision centres. Analysis from **Figure 14** in Appendix A suggests that despite the cumulative spend on equipment increasing over the years; there is no significant increase in the number of refractions at the vision centres. Hence, spend on capital equipment may be considered as 'inefficient'.

A high-level efficiency evaluation of the capital investment was performed, with the following assumptions,

a. MECC programme provided four pieces of equipment[viii] to the operational vision centres, namely:
    i. Auto-refractometer (for measurement of the eye's spherical refraction, which is altered in myopic and hyperopic patients),
    ii. Retinoscope (to illuminate the internal eye and to observe and measure the rays of light as they are reflected by the retina),
    iii. Ophthalmoscope (to detect and evaluate symptoms of various retinal vascular diseases or eye diseases such as glaucoma), and
    iv. Vision drum/ trial frame & lenses (for testing the vision of patients)
b. In an ideal scenario, average time a patient would spend on a particular equipment would be 8 minutes and all patients would be using all the equipment.
c. Ideal equipment utilization was assumed at 90% and the facility was assumed to be ideally operational for 8 hours, 4 days[ix] a week.

Based on the assumptions, optimum utilization of the equipment would imply that a vision centre should be able to refract ~56,000 patients as depicted in **Table 14** in Appendix A. Currently, average refractions per vision centre stand at ~12,000 which is merely 21% of the best case utilization. While, the limited demand for the services (due to absence of marketing and effective IEC strategy) was the prime reason for low operating hours, it is worthwhile to note that the evaluators did not consider additional cost of human resource required to operate the equipment at optimal capacity, while performing this analysis.

[viii] This is based on the Equipment Inventory list given by Sightsavers
[ix] The Vision Centre Conceptualization Workshop held in May 2013 recommended that each vision centre be operational for minimum four days a week.

Efficiency	*Assessment:* Satisfactory	

While evaluating the cost-efficiencies of various activities under the MECC programme, the evaluators observed that all activities become cost efficient during the latter part of the programme, which was influenced by the devaluation of the Rupee. There were internal year-on-year variations in cost-efficiencies which were attributed to low target achievement (for IEC activities) or higher spend under certain headings like 'care and maintenance' (for spectacle dispensed). Excluding these variations, the cost per activity remained relatively similar with a nominal variation of 10% across the years. However, the spending on procurement of medical equipment for the vision centres was found to be inefficient, in light of sub-optimal utilization.

Despite the programme being cost-efficient based on internal comparison, the evaluators believed that the target set for the activities were very low, which resulted in higher spend per activity. The cost/spend efficiency could have been further improved by initiatives like centralized procurement of spectacles and rationalization of capital spent on procurement of equipment, by sharing movable, light weight equipment across vision centres, which can help enhance utilization efficiency of the equipment.

3.4 Impact

This section provides insights into the positive change brought about by the MECC programme, in terms of tangible or intangible benefits, for the different stakeholder groups. The output indicators defined as a part of the MECC programme logframe could not be used in their entirety due to lack of a baseline, missing data points[x] and absence of interim reviews[xi]. It therefore became imperative for the evaluators to define output criteria to measure the impact created by the programme using an analytical approach based on quantitative and qualitative data, compiled during the evaluation.

In this section, we intend to answer some of the following questions,

A) What is the impact created by the programme? How did the programme perform with reference to specific impact indicators?

[x] Log frame indicator 'Quarterly Quality assurance review meeting established at district level' could not be measured since this activity was not undertaken.
[xi] Log frame indicator 'Patients exit interviews show 90% approval levels around staffing' could not be evaluated since this indicator was not measured year on year.

B) What were the unintended positive outcomes of the programme? What extent of change did the programme bring about in the unintended outcomes?

A) What is the impact created by the programme? How did the programme perform with reference to specific impact indicators?

The impact created by the MECC programme was measured in terms of the progress achieved by the programme across key performance indicators, defined by the evaluators.

The impact created by the programme has been depicted in **Table 15** in Appendix A. The programme was able contribute to building local capabilities by training local resources for outreach activities and creating well-equipped vision centres. The programme screened more than 30% of the target population and performed refractive testing of more than 12% of the target population. Through its awareness and IEC activities, the MECC programme reached ~0.6 million people, much higher than the set targets. Additionally, through the screening and eye testing the programme was able to identify more than 46,460[17] individuals with complex eye care conditions (including cataract, glaucoma, diabetic retinopathy, squint, etc.) and referred them for specialized care. The programme distributed 49,591[xii] spectacles to the economically productive age group, thus contributing to 'potential' improved employability of these individuals.

B) What were the unintended positive outcomes of the programme? What extent of change did the programme bring about in the unintended outcomes?

Apart from positively impacting the target population, MECC also produced some encouraging supplementary impact on all the stakeholders – community, partners, programme staff and CBOs, which included the following:

a. Utilization of services by the community outside of the primary service area

The exit interviews of 25 patients revealed that around 16% of the respondents were from outside the primary service area (from outside the ward in which the vision centres were located). All the CBO representatives reiterated this fact, but were not able to quantify the usage of these services by people from outside the target area.

"...I live in a village near Kalyan. I travelled all the way to Wadala by train, just so that I could get my eyes tested. I will have to come back next week to collect my spectacles…" **– Patient, Male / 62 years**

[xii] This indicator is calculated using the total number of spectacles and optical devices distributed over 5 years (98,739), based on the percentage of people in the employable age group (20-59) requiring eye care services (51.3%). Source: Key Indicators of Employment and Unemployment in India, 2011-12, NSS KI. (68/10).

b. Credibility for CBO in the community and additional source of sustainable revenue

Despite most CBOs having certain amount of presence and credibility in the local community, the programme helped them increase their reach and visibility within the community. As per discussions with the CBO representatives, as a result of this programme, the community members have now become more receptive towards other activities initiated by the CBOs.

MECC also provided the CBOs with an additional source of income and improved their sustainability. The total income, cumulatively generated by all the 15 CBOs, as partners to this programme, was estimated to be approximately USD 26,660, which includes share in the sale of spectacles, share in user registration charges and income as a part of monthly maintenance. Some indirect economic benefits also accrued to some of the CBOs, such as improved revenue from diagnostic services & increased utilisation of and income from other health services.

"…People have started recognizing us and now we get a good response from them for whatever activities we undertake…" **– CBO**

c. Referrals and identification of eye problems beyond refractive errors

The programme model of MECC was designed to detect refractive errors and refer patients with complex disorders for more specialized consultations. As a result the programme supported by referring patients with eye problems other than refractive errors, like cataract, glaucoma, squint and diabetic retinopathy among others, to the partner facilities. It created an efficient referral network through a hub and spoke model, wherein eye screening was done at the vision centre (spoke), and complex eye disorders were referred to the partners' facilities (hub). One of the partners referred 28,745 patients to its facility over the duration of this programme and performed 3,346 surgeries, mostly for cataract. Considering that cataract is the largest cause of avoidable blindness in India (62.6%[18]), this is a significant positive effect though it was not a part of the objectives of this programme.

d. Increased reach and revenue for the partners

Before this programme, both the partners had limited coverage and visibility and worked in silos. MECC made it possible for them to widen their patient base and benefit the larger community, thereby helping them achieve their objectives. In addition to this, partners were able to generate additional revenue through sale of spectacles, and registration charges, diagnostic services and eye surgeries for referred patients at their facilities.

e. Hands on experience for trainee optometrists

This programme also provided a platform for the under training optometrists to receive hands-on training on a relatively larger pool of patients, which otherwise would not have been possible at the partners' facilities and outpatient units.

Impact	*Assessment:* Satisfactory	

The MECC programme trained local resources and created well-equipped vision centres within the community, which helped meet 30% of the community's screening requirement and 12% of the refraction requirement. Additionally, the programme was able to reach 0.6 million people and identify approximately 46,460 individuals with eye problems other than refractive errors. The programme also directly created a potential impact on productivity and employability by distributing ~50,000 spectacles within the community. The programme also created an unintended impact by helping CBOs strengthen their credibility within the community and attracting population from outside the targeted service area. The programme also provided revenue sources for partners and CBOs which improved their sustainability. Trainee optometrists were also benefited as they got hands-on training at the vision centres.

3.5 Sustainability

Sustainability refers to the continuation of a programme or its effects[19]. Sustainability is a critical component of an evaluation study, especially to help policy makers and practitioners understand the long term viability of a programme, in lieu of scarcity of resources. While effectiveness and efficiency attempt to review the level of optimization of the programme, sustainability is interested in understanding whether the improvements achieved by the programme in health are going to be sustained beyond the life of the programme.

For MECC, evaluating the sustainability will be important to understand if the programme and its impact will continue post the withdrawal of funding support. The critical questions that this section attempts to address are,

A) What were the modifications made in the programme to bring in sustainability? What are the associated challenges as efforts to instill sustainability were made?

B) Is the programme, in its current modified construct, designed to be financially sustainable?

C) Does the programme, in its current modified construct, have the capabilities, both operational and administrative, required to execute this initiative?

D) What more can be done to make the programme operationally and financially more sustainable?

A) Modifications in the programme to improve sustainability and the associated challenges

a. User Charges and Fees for Services

When the programme started in 2009, different user charges were levied by the partner organizations. Initially, one of the partners provided free eye checkups while charging INR 25 (USD 0.42) for the spectacles. The second partner, on the other hand, charged INR 10 (USD 0.17) for the checkup/ registration and provided spectacles for free. Amidst the programme tenure, serious concerns were raised by donor agencies with regards to the design of the vision centres and whether they were structured to ensure financial sustainability. The rationale of providing spectacles free of cost was also critiqued. This made it imperative to restructure the design of the vision centres and explore options of reducing operating costs whilst generating more revenues, which resulted in partner organizations revising the rates/charges for providing spectacles. The revised rates are mentioned in **Table 16** in Appendix A.

The levy of user charges has led to higher patient dropouts in purchasing the prescribed spectacles. During the initial three years of the programme when spectacles were provided at nominal charges, almost 99%[xiii] of the patients purchased the spectacles. When additional charges were levied, ~32%[xiv] of the patients dropped out. This impacted the programme performance but marginally improved sustainability.

b. Partnerships with CBOs restructured

When the programme commenced, one of the partners shared INR 10 (USD 0.17) per spectacle dispensed with the CBOs, while the other partner shared INR 10 (USD 0.17) per refracted patient with the CBOs. As the partner organizations increased the charges for spectacles, due to concerns raised by the donors around sustainability, the arrangement with the CBO was changed. This is depicted in **Figure 16** in Appendix A. One of the partners started paying maintenance charges at USD 50 per month per vision centre, instead of sharing revenue. This helped the partner organization eliminate ‘overpayments’ to CBOs from higher volume of spectacle sale. The overpayment was cited to have negatively impacted their net collections and hence impacted the programme’s sustainability. The evaluators however observed that the changed

[xiii] As per primary discussions with programme manager of one of the partners
[xiv] Derived from ‘spectacles prescribed’ and ‘spectacles dispensed’ data of KBHB from Oct 2013 to Jun 2014

arrangement delinked the CBO from the overall initiative. Initially, the CBO's were indirectly incentivized to reach a larger community and have higher footfalls to the vision centres. However, with no payouts on per patient basis, the CBO is assured fixed payouts irrespective of the performance of the health workers or reach to the masses.

c. Human Resource Modifications

The vision centres under MECC employed a high number of community health workers in order to increase the general eye care as well as programme awareness. Vision centres under one of the partners employed as high as 31 health workers in December 2011 for its 8 vision centres. When concerns over the underutilization of vision centres was raised by the donor, the number of health workers in these vision centres was reduced to 16 to bring down operational costs. Similarly, vision centres operated by the other partner had 21 health workers in the beginning of the programme which dropped to 1, when the programme concluded.

The decision of the programme team to reduce human resource to lower the burden of operating costs led to a reduction in the number of people screened which potentially slowed down the pace of outreach and door to door awareness activities. **Figure 15** in Appendix A attempts to indicate the correlation between the drop in human resource and the no. of people screened. The most optimal point was in 2012-13, which highest number of individuals were screened per health worker (refer Efficiency).

B) Is the programme designed to be financially sustainable?

Following the completion of the programme, currently 13 vision centres continue to operate, with the operating costs borne by the partner organizations. **Table 17** in Appendix A provides an estimate of the cost of running one vision centre by both the partners and the associated revenues generated. There was a shortfall of about 50% revenue for both vision centres when compared to their operating costs.

At current operations, in order to make the vision centres self-sustainable, the rates for spectacles would need to go up to INR 800 (USD 13.3) for KBHB and INR 632 (USD 10.5) for LCO. However, this increase in the price may potentially lead to a higher dropout in procurement of spectacles by patients. Post the increase of spectacles price, there has been a ~32% dropout of patients. **Figure 17** in Appendix A shows the dropout if the spectacle prices were further increased to fill the sustainability gap.

If the prices of spectacles are increased, the conversion rates will drop significantly, which will make the vision centres unsustainable. In its current structure, even on increasing the cost of spectacles, the programme is not designed to ensure financial sustainability.

C) What can be done to make the programme sustainable?

It is imperative to have a detailed business plan for understanding the design of the vision centres. The business plan needs to take into account the following four possible options to reduce the sustainability gap, without actually increasing the current prices for spectacles.

i) Increase coverage:

The population density of Mumbai is 29,650 people per sq. km[20]. Considering that one vision centre covers a population within the radius of 1 km around it, a vision centre caters to 93,101 people[xv]. As per the current prevalence of refractive error (36.68%[21]), there is a requirement of 34,145 refractions per vision centre. However, according to the secondary data, the no. of refractions per vision centre stands at 12,083. In lieu of this, there is a scope of significantly increasing the coverage in the current construct of the programme.

"...I live in a village near Kalyan. I travelled all the way to Wadala by train, just so that I could get my eyes tested. I will have to come back next week to collect my spectacles..." **– Patient, Male / 62 years**

ii) Increase offerings by including diagnostic services:

Currently the vision centre model provides refractive error services to the masses. In order to bolster the value chain of services provided, additional services like basic blood tests can be made available. These are of direct relevance to the target population and the nature of eye problems. E.g. Adult population is more likely to suffer from diabetes or other co-morbidities. These services can be provided using 'sample collection centre' formats and can be charged for at competitive market rates.

iii) Reduce procurement costs:

The expense on procurement of spectacles is one of the major cost heads and contributes to 11% of the vision centres' monthly operating expense. Currently, both the partners procure spectacles for their patients on their own with some difference in delivery time. While one of the partners delivers its spectacles in 1 week, the other one does the same in 2 weeks. Both the partner hospitals also have considerably different procurement costs as indicated in **Table 18** in Appendix A. To make the vision centres more sustainable, it is necessary to reduce its procurement cost. A central procurement unit set up by engaging both the partners and other stakeholders could be a potential solution.

iv) Source back funding from referred patients:

[xv] Population residing in 1 km radius can be computed by 3.14 x population per sq. km (3.14 x 29650)

In most cases, vision centres refer patients to the respective linked hospitals for advanced treatment. This typically includes referrals for cataract and glaucoma surgeries. The vision centres are currently referring 49 patients a month to their linked hospitals for treatment. A portion of the amount charged to these patients for the surgery (say about 3-5%) can be used to fund the vision centres. This will not only create sustainability, but also increase the accountability and ownership of the stakeholders at the vision centres and the partner hospitals.

"...For Phaco surgeries, we charge Rs. 7000 to general population and Rs. 1500 to BPL patients for Indian lens while it is Rs. 13500 for an imported lens with no BPL subsidy…" **– One of the partner organizations**

Sustainability	***Assessment:*** **Caution**	

The evaluators observed that sustainability was an area of concern. The vision centres in their current structure continue to remain unsustainable despite the minor modifications around introduction of higher user charges, reduced staff and reducing operational expenditure. The evaluators observed a significant gap in financial sustainability with vision centres, with the centres generating revenue which contributed to less than one third of their operating costs.

Modification in the design construct of the vision centres can help bolster sustainability of the programme. Modification in the design by including diagnostic services, reducing spectacle procurement costs through centralized procurement and providing referral commission to the vision centre can help improve sustainability. The evaluators have structured a high level sustainable business plan, incorporating the set of design modifications suggested, in the subsequent chapter.

3.6 Coherence / Coordination

The term coherent programme, or aligned programme, refers to a programme that is well organized, free of operational gaps, purposefully designed to facilitate learning and aligned across partners, stakeholders and locations. Coherence becomes critical for large scale interventions like the MECC which engage multiple stakeholders, with diverse background and differing sets of capabilities. Coherence attempts to understand the extent of synergy between the capabilities of these different stakeholders and the extent to which it helped achieve the larger goal of the programme.

This section intends to answer four key questions:

A) How effective was the partnership between Sightsavers and partner agencies?

B) What specific gaps in coordination have impacted the smooth functioning of the project if any?

C) How well has the project coordinated with local health authorities in Mumbai, especially the State Blindness Control Society and how has it contributed to the achievement in the project?

D) Are the project objectives, approaches and design coherent and complimentary with each other?

A) How effective was the partnership between Sightsavers and partner agencies?

The MECC programme was able to develop a synergistic relationship between the two partner hospitals and the Sightsavers team. The evaluators observed that the partner hospitals were highly appreciative of Sightsavers support for the intervention; however discussions with Sightsavers officials indicated concerns over the quality of the programme delivered by one of the partners. Further, there was no interaction between the two partner hospitals, due to failure of the programme to create opportunities for the two partners to share knowledge and ideas.

The Community Based Organizations (CBOs) were an important stakeholder group in the implementation of the programme. However, the evaluators observed that all the CBOs shared a strong relationship with the respective partner organizations, but had limited interaction with the Sightsavers India team. This was apparently attributed to the fact that Sightsavers India played nominal role in the selection and evaluation of CBOs, presumably to ensure single line of management control[xvi].This helped ensure a single line of control and improved accountability of the partner hospitals, but may have reduced Sightsaver's visibility and ability for an independent review.

B) How well has the programme coordinated with local health authorities in Mumbai, especially the State/ District Blindness Control Society and how has it contributed to the achievement in the programme?

The District Blindness Control Society was not directly involved in the programme, despite the partner hospitals having some form of coordination/ linkage with the society[xvii]. The MECC programme did not play an active role in this collaboration and most of the activities were done via the partner hospitals, with limited visibility of the

[xvi] Interactions with Sightsavers India officials revealed that they wanted partner hospitals to have full control of the programme and thereby enforce higher accountability. Their direct involvement with CBOs could have been perceived as 'unwanted interference' by the partner organizations. Partner organizations were more critical to the success of the programme than the CBOs.

[xvii] All cataract operations done by the partner hospitals were reported to the blindness control society and were also provided with special subsidizes (by the state blindness control society) in select cases.

other MECC stakeholders. However, the MECC programme worked towards advocating setting up of beepers in the railway stations to help blind people have a smooth ride, and collaborated with Reserve Bank of India and State Bank of India to set up ATMs which have Braille language[22].

C) Are the programme objectives, approaches and design coherent and complimentary with each other?

The key objective of the programme was to raise eye care awareness amongst the poor population of Mumbai and provide affordable treatment for refractive error. **Table 19** in Appendix A provides an assessment of the alignment of the objective, approach and design and whether they complimented each other.

The evaluators observed lack of congruence between the overall design and approach of the programme to achieve the stated objectives. In principle, the targets set appeared very low and were not adequately rationalized based on the programme design and construct. Additionally, targets were designed for the entire programme and not for specific sub-activities, which further resulted in non-alignment to the objectives. E.g. vision centres were to be established to provide refractive error services, however targets for providing these services were at programme level and often included refractive error services provided at camps.

Coherence / Coordination	***Assessment:*** **Caution**	

The key stakeholders of MECC, namely Sightsavers and partner hospitals, shared a healthy relationship and worked in synergy to achieve the programme goals. However, there was no synergy, interaction or knowledge sharing between the two partner hospitals. Sightsavers also had a limited interaction with CBO partners and district blindness control officials. The evaluators also observed a relatively low coherence between the programme objectives and the approach adopted to achieve them, which had a potential impact on the level of success of the intervention.

The evaluators believe that establishment of an area/district level team, with government agencies being an important stakeholder, would have helped the programme achieve better integration with health systems priorities and infrastructure. Further, the targets for the various activities should have been adequately rationalized and reset during the course of the programme to achieve better coherence. Also, separate targets for vision centres and outreach activities like camps could have helped better alignment to the specific goals.

3.7 Scalability / Replicability

Scalability is defined as the potential of performing the programme on a larger scale, for instance, by extending the programme from one district to the entire state/region. Scalability is a vital parameter and is tied into sustainability, as it becomes imperative for such initiatives to go beyond the geographies it caters to. At this juncture, it is important to review the current construct of this programme and garner insights into how the programme can be structured better to ensure scalability.

In this context, this section attempts to answer three specific questions,

A) Does the programme model have robust operational and administrative methodologies in place to ensure a rapid scale up?

B) Can the programme ensure adequacy of human resources to scale up?

C) Does the programme have the necessary partnerships in place to support scale up?

D) Does the programme model have adequate financial resources (or modules to generate revenue) to support a rapid scale up?

A) Does the programme model have robust operational and administrative methodologies in place to ensure a rapid scale up?

In an attempt to understand the operational and administrative scalability of the programme, the evaluators have looked at the following components,

a. **Scalable programme design:** The programme design conceptualized vision centres within the community to provide primary eye care services, which are easily accessible to the community. These vision centres were low cost 'asset light' formats, with minimal capital equipment required to operate. The vision centres were established in centres operated by CBOs and didn't require creation of new physical infrastructure. The vision centres were conceptualized with a robust referral system, making specialized services accessible via partner hospitals. This typical 'hub and low cost spoke' model of care, allows the concept to be rapidly scaled across multiple locations.

b. **Scalable reporting processes:** The reporting processes related to patient database, spectacles dispensed, IEC materials distributed, etc. are fairly simple

allowing rapid scalability. The current monitoring processes being inadequate, new systems/ protocols need to be established to strengthen monitoring. A non-complex, automated MIS (management information system) tool will not only ensure completeness of data and information, but also help in avoiding errors caused due to manual inputs. The evaluators however believe that the newer operational processes and MIS will continue to remain simple allowing rapid scalability.

c. **Scalable operational processes:** The operational processes and protocols comprising of patient registration, patient testing, patient prescription, etc. are also very simple and can be rapidly scaled up.

While the programme appears scalable administratively and operationally, the evaluators observed some other parameters that may limit the scalability e.g. the programme engaged with only two partner hospitals which limited the geographic scale of operations. The evaluators also observed that a simple but comprehensive IT solution could help improve the management of data, and documenting of best practices and programme learnings.

B) Can the programme ensure adequacy of human resources to scale up?

Availability of training and qualified personnel is critical for scaling up the primary eye care services programme. In the current design, the partner hospitals identify and train community health workers to conduct screening activities and support awareness initiatives. Evaluators believe that it would be relatively easy to identify and train community personnel, though their retention has been a cause of concern.

However, recruitment of more specialized personnel namely optometrist and vision technicians is envisaged to be difficult and may negatively impact scalability. Based on discussions, the MECC programme leveraged qualified personnel from the partner hospitals. Partner hospitals' capabilities and personnel pool will significantly influence the scalability of the programme.

C) Does the programme have the necessary partnerships in place to support scale up?

For scaling up to new geographies, it is critical to partner with hospital/ medical/ healthcare institutions, with similar ethos and vision. Based on discussions with partner hospitals, it was observed that they preferred to operate vision centres in proximity to their central facility, as that helps them improve their operational efficiency and target relevant areas which lie within their primary patient drainage area (i.e. in proximity to their central facility).

The MECC programme also partnered specifically with institutions with special set of expertise in provision of eye care services. The evaluators however believe that this specific set of expertise is not required to operate and manage basic eye care services. The MECC programme can consider partnering with multispeciality hospitals with a wider set of focus specialties not restricted to eye care. This will help bring down operational cost, improve competition and enhance geographical coverage for the programme.

Additionally, the evaluators also observed a lack of collaboration and partnership with state and district authorities. The capability of MECC to reach out to 10 million people across the city will largely depend on how well they collaborate with the district authorities and leverage their infrastructure, resources and capabilities.

D) Does the programme model have adequate financial resources (or modules to generate revenue) to support a rapid scale up?

Adequacy of financial resources to set up more vision centres, cover more geographies and sustain operations is a critical parameter for evaluation of scalability. The evaluators have recommended change in the programme design of the vision centres by introducing a wider range of relevant services, improving procurement processes and rationalizing capital expense by sharing resources across different vision centres. With these set of recommendations, the operations of the vision centres shall become self-sustainable and the capital and operational expenses will be minimal. This will support rapid scale up to newer geographies and locations.

Scalability / Replicability	***Assessment:*** **Satisfactory**	

The MECC programme was designed with significant thought to ensure scalability. The design of the vision centres, the simple operative and reporting modalities and training modules to engage local community health workers in screening patients, were conceptualized to support scalability. However, the evaluators believe that in order to scale the programme to newer geographies or extend the coverage within the city, partnerships with healthcare providers and district authorities will be imperative. Additionally, optimizing resources and providing a wider set of services will enhance the potential for financial scalability of the intervention.

4. Summary, Conclusion and Recommendations

In this section, we present our overall conclusions on the strategic evaluation of the MECC programme across the suggested evaluation criteria (relevance, efficiency, effectiveness, impact, sustainability, scalability/ replicability, coherence/ coordination). The evaluation conclusions are followed by key lessons learnt and recommendations to improve the performance and effectiveness of the MECC programme and approach for future use and draw on the evaluation findings and our judgment.

Relevance	***Assessment:*** **Satisfactory**	GA

The MECC programme was designed in response to the needs of the community and concentrated its efforts in geographies that were underserved. The programme's three prong approach of creating awareness, developing permanent institutions within the community and providing comprehensive access to primary eye care services, namely refractive services was in alignment with the national strategy.

The evaluators however observed a mismatch in the programmes alignment to Sightsavers strategy primarily due to low involvement of the government agencies and limited focus on building local teams were some areas of concern.

Lessons learnt/ Recommendations

a. **Define the programme focus with considerations to clinical co-morbidities:** The programme intended to target adult population and cater to refractive disorders. The target age group also tends to have a high prevalence of other eye disorders including cataract, glaucoma and diabetic retinopathy. The relevance of the programme design, for the target population and geographies, could have been increased by including these within the core focus areas. Evaluators believe that this would not have diluted the focus on refractive error services, but helped strengthened provision of more comprehensive primary eye care services.

b. **Improve and ensure engagement with district and state authorities:** The programme had no linkage with district and state authorities for blindness control.

The evaluators believe this engagement could create opportunities to leverage public infrastructure and resources, while supporting massive scale up across the district.

c. **Ensure alignment with Sightsavers strategic framework:** The strategic framework of Sightsavers is a comprehensive tool and parameters under this tool can help structure a relevant, sustainable, scalable and efficient programme. This framework should have been used to validate the design of the programme. Additionally, in alignment with the framework, building area level teams to oversee the programme along with providing strategic suggestions on an ongoing basis is imperative. This could have been done by garnering support from district administration, CBOs and other external partners not directly involved in the delivery of the programme.

Effectiveness	***Assessment:*** **Satisfactory**	

At a consolidated level, the MECC programme was able to achieve the targets set out except for achievement in targets for IEC activities. Favourable drivers included the CBO and hospital partnerships, use of local resources from within the community, active outreach and patient identification process.

Despite being operationally efficient, the evaluators observed certain limitations. The targets set were too low and lacked internal correlation. The monitoring mechanism was overtly focused on achievement of targets and overlooked the faulty target measurement methodologies. Targets were not reset despite the programme overachieving most of them. Information verification systems were weak and there was limited sharing of learnings between the partner organizations. The evaluators believe that if these limitations were addressed, the effectiveness of the programme could have been higher.

Lessons learnt/ Recommendations

a. **Develop platforms for interaction between the partners and other stakeholders:** The MECC programme partnered with two hospitals and several

CBOs to support its implementation. However, during the course of five years, very few opportunities were created for the stakeholder to share experiences, insights and best practices. Such collaborative platforms can help improve the knowledge base on the programme and help resolve operational or programmatic issues.

b. **Ensure independent programme review/ interim reviews:** Interim programmatic review by external agencies can provide critical insights into operational issues, reporting structures and comprehensiveness of data captured. Additionally analysis of this information can provide the programme owners with relevant insights to take timely and corrective action. The MECC programme didn't employ interim reviews, which to a significant extent limited its effectiveness. Additionally, it is known that interim reviews can instill accountability and improve process standards.

c. **Improved and ongoing monitoring mechanisms:** There is a need for the programme to have a monitoring system in place wherein the providers, funders and other stakeholders can have a constant view of the programme achievements. The current processes are focused more towards input oriented performance and very little analysis or ongoing monitoring was done during the course of the programme. A central unit or a programme consultant should be deployed for a programme of this scale for analyzing information on an ongoing basis, to improve decision making and information sharing.

Efficiency	***Assessment:* Satisfactory**	

The MECC programme showed higher cost efficiency towards the latter part of the programme (2011-14) due to rapid devaluation of the Rupee. While, there were variations in cost efficiency due to factors of low target achievement (for IEC activities) or higher spending under on select headings of care and maintenance (for spectacle dispensed), on excluding these variations, the cost per activity remained similar across the years.

Despite the programme being cost-efficient based on internal comparison, the low targets actually resulted in higher spend per activity. Lack of rational methods to optimize the use of financial and capital equipment was observed by the evaluators. The spending on procurement of medical equipment for the vision centres was found to be highly inefficient, due to sub-optimal utilization.

Lessons learnt/ Recommendations

a. **Central procurement System:** With each partner procuring spectacles separately, there is an opportunity to create a central procurement activity. While there can be challenges associated with operationalizing a centralized procurement system, it would play a vital role in reducing operating costs. It may also aid in improving and standardizing quality and demanding better servicing standards from the vendors.

Figure 2: Current Model of Procurement

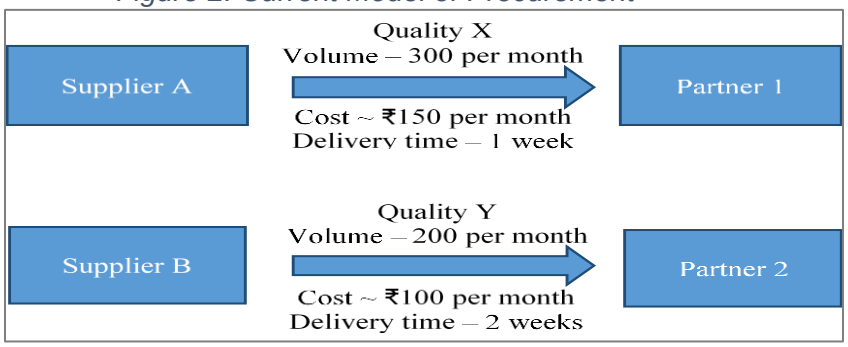
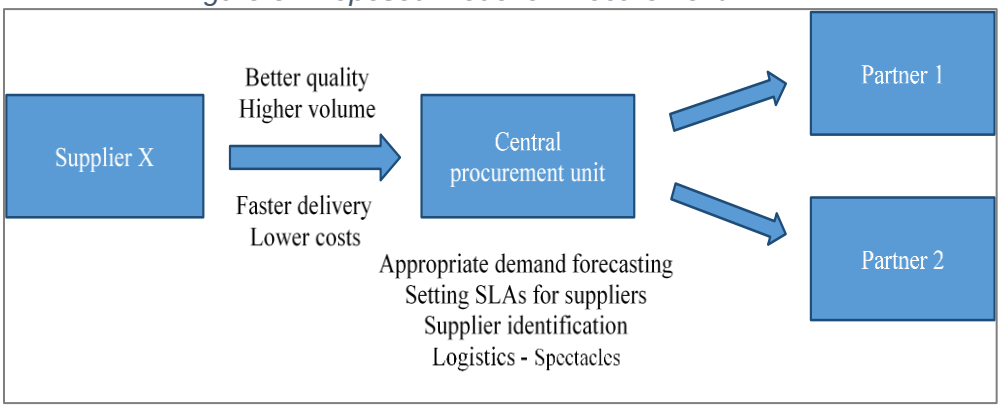


Figure 3: Proposed Model of Procurement



b. **Rationalize equipment utilization prior to making capital expenditure:** The MECC programme procured and installed 13 sets of equipment across the vision centres. While the intention was to equip the vision centres to provide better quality of services, the investment was inefficient since the vision centers only operated once a week.

c. **Use cheaper innovative technologies:** Newer solutions like Netra[23] can help bring down the costs of refractive error testing and associated costs of deploying trained and expensive human resource. While these solutions are being tested in the market for their efficiency, aligning to such solutions is imperative.

d. **Incentives to the community health workers to perform:** The health workers are paid a fixed salary of ~INR 2500 (USD 41.67) per month. Having a success linked fee structure will provide incentive to the health worker to screen more people. The fee structure could be a fixed salary plus a variable fee which is dependent on the number of people examined at the vision centre. E.g. an incentive of INR 10 (USD 0.17) each to both the CHWs, for every spectacle sold beyond the target of say 100 per month.

Impact	***Assessment:* Satisfactory**	

The MECC programme brought about a significant positive impact for the community by training local resources and creating vision centres, which helped improve access to eye care services. Based on the evaluators' assessment, the programme screened 30% of the target population and refracted about 12% of target population. The programme also reached to 0.6 million people to create awareness related to eye care services. The programme also identified 47,500 individuals with eye care needs other than refractive errors and referred them to specialized facilities. The programme also had a positive impact on the CBOs and partner hospitals by helping improve their credibility, increasing their coverage and providing additional means for revenue generation.

Sustainability	***Assessment:* Caution**	

Sustainability of the programme was a serious concern. Efforts were made to improve sustainability by introducing higher user charges, reducing staff and working to reduce operational expenditures, but didn't significantly contribute to improvements.

The evaluators believe that restructuring the vision centres, after a thorough feasibility assessment, can help improve the sustainability scenario. Modification in the design like including diagnostic services, reducing spectacle procurement costs through centralized procurement and providing referral commission to the vision centre can help improve sustainability.

Lessons learnt/ Recommendations

The evaluators have structured a high level sustainable business plan, incorporating the set of design modifications suggested. On account of this, the construct of the vision centres would change, but can help bolster sustainability.

Construct of a sustainable vision centre model

- Central procurement of spectacles will ensure a lower procurement price which will further increase the margin and sustainability. A 10% discount on the current procurement cost of one of the partners has been assumed, given the volumes will double.
- The vision centre refers ~150 patients a month to the linked partner hospitals. Cataract patients form a huge chunk of these referrals and an estimated 12% of these referral patients will undergo cataract surgery at the referred hospital with the average cost of surgery being INR 11,000 (USD 183.33)[xviii]. 5% of the revenue generated is estimated to be used for refunding the vision centre.
- At every vision centre, an estimated 193 people per month who are prescribed spectacles will not actually buy them. This leads to a revenue loss of INR 47,500 (USD 791.67) per month. Incentives can be provided to the community health workers which can be linked to the number of people purchasing spectacles from the vision centre. For every patient purchasing spectacle, beyond the estimated 177 per month, each health worker at the vision centre is assumed to be given an incentive of INR 10 (USD 0.17). The total incentives are estimated to be INR 960 (USD 16).
- Costs – Staff wages, travel, marketing and office expenses have been increased in accordance with the change in programme structure and the increase in the patient

[xviii] This figure was derived based on an average of the cost of different types of cataract surgeries performed at one of the partner hospitals.

inflow. The service delivery costs are considered at a 10% discount, as described above.

Table 2: Proposed resources

Resources	Proposed Number
Programme manager	1 per partner
Optometrists	2 per VC
Data entry supervisor	1 per partner
Supervisor	1 per partner
MV driver	2 per partner
CHW	2 per VC

Figure 4: Sustainable vision centre

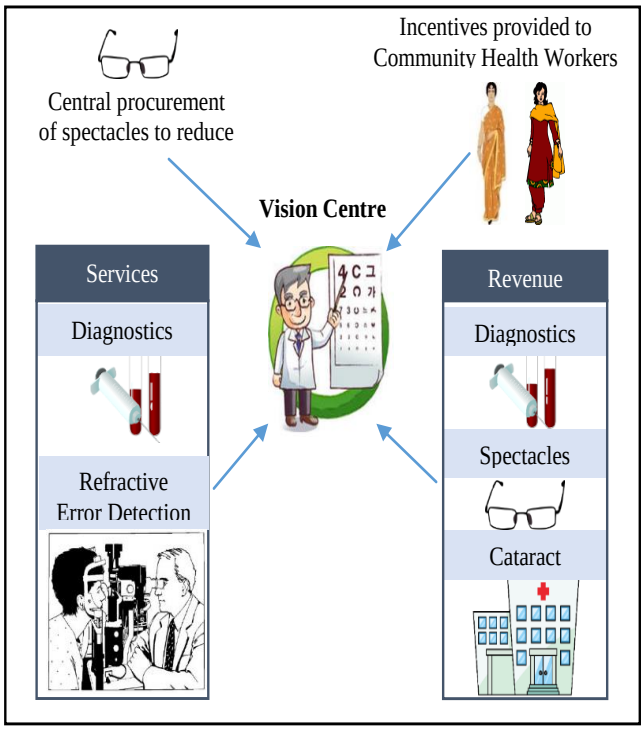


Table 3: Model for a sustainable VC

Particulars	INR
Revenue from spectacles	55,600
Revenue from diagnostic services	8,200
Revenue from refunding	11,300
Total Revenue	**75,100**
Staff wages – Programme manager, optometrist, data entry supervisor, MV driver, CHW	35,000
Travel	1,300
Office expenses	10,400
Service delivery expenses	18,650
Other expenses	8,790
CHW incentives	960
Cost of running the vision centre	**75,100**
Sustainability gap	**0**

Some of the baseline assumptions to create this model have been provided below:

- To ensure the sustainability of the vision centre, 581 people need to be refracted and 177 people need to buy spectacles. Dropout rate of 50% at INR 250 (USD 4.17) has been considered.[24]

- In order to refract 581 people, the vision centre needs to be open for ~90 hours a month. In order to manage this, the vision centre has to be open for more hours and 2 optometrists have to be present to speed up the process. Staff wages, travel cost and admin cost have been increased accordingly.
- Along with refractive error services, diagnostic services are also provided at the vision centre which includes blood test for diabetes. It is estimated that 80% of the patients referred, will avail this service. An estimated charge of INR 200 (USD 3.33) per patient has been assumed, of which 30%[xix] would act as a margin for the vision centre.

Coherence/ Coordination	***Assessment:* Caution**	

The key stakeholders of the MECC programme, namely Sightsavers and partner hospitals, worked in synergy to achieve the programme goals. However, Sightsavers had a limited interaction with CBO partners and district blindness control officials. The evaluators also observed a relatively low coherence between the programme objectives and the approach adopted to achieve them, which had a potential impact of the level of success achieved by the intervention. The targets/ goals set for different activities were not completely in sync with the project design and its larger objective. Vision centres were established to reach out to more people and make services accessible; however the consolidated targets for people refracted remained very low and lacked utilization rationale. Furthermore, the set targets were not demarcated to rationalize the creation of permanent facilities in the community i.e. the targets were consolidated targets for patients refracted through camps and vision centres.

Lessons learnt/ Recommendations

a. **Quarterly Review meetings engaging different stakeholder groups:** The MECC programme could have had better coherence among the stakeholders if a platform for sharing of information, was created. This platform would not only have aligned the stakeholders to the vision of the programme, it could have acted as an instrument for ongoing monitoring.

b. **Rational target setting:** As any programme evolves, so should the targets for the various activities under the intervention. The MECC programme failed to regularly update/modify these targets despite apparent concerns raised by the donors. A regular interaction with the stakeholders should have helped rationalize the targets based on the current performance, anticipated demand and capabilities of the execution team.

[xix] A typical sample collection unit works in this format.

c. **Improve and ensure engagement with district and state authorities:** The programme had no linkage with district and state authorities for blindness control. The evaluators believe this engagement could create opportunities to leverage public infrastructure and resources, whilst support massive scale up across the district.

d. **Build district level/ area level teams:** Building area level teams to oversee the programme along with providing strategic suggestions on an ongoing basis is imperative. This could have been done by garnering support from district administration, CBOs and other external partners not directly involved in the delivery of the programme.

Scalability/ Replicability	***Assessment:*** **Satisfactory**	

The MECC programme was designed with significant thought to ensure scalability. The design of the vision centres, the simple operative and reporting modalities and training modules to engage local community health workers in screening patients, were conceptualized to support scalability. However, the evaluators believe in order to scale the programme to newer geographies or extend the coverage within the city partnerships with healthcare providers and district authorities will be imperative. Additionally, optimizing resources and providing a wider set of services will enhance the potential for scalability of the intervention.

Lessons learnt/ Recommendations

a. **Using mobile and communication technology optimally:** Community health workers are actively reaching the community in order to make them aware about eye-care and encourage them to visit the centre for check-up. Along with this active reach-out, passive reach-out models can be considered, where a specific telephone number be made available to the community to seek information related to eye health services. Using bulk messaging services to reach out the community should be explored

b. **More technical (hospital) partners:** If a programme has to be scaled up, restricting a big programme to a few partners creates limitations and poses enormous challenges and risks to the programme's success. It is critical to identify partners with similar vision and values within the same geography of the target population. Having more number of partners helps promotes internal competition and also improves coverage. However, it is imperative that the core team have adequate capabilities and bandwidth to operate with a multitude of partners.

c. **Use cheaper innovative technologies:** Newer solutions like Netra[25] can help bring down the costs of refractive error testing and associated costs of deploying trained and expensive human resource. While these solutions are being tested in the market for their efficiency, aligning to such solutions is imperative.

5. Appendices

5.1 Appendix A: Tables and Figures

Table 4: Indicative parameters for vision centre selection

Parameters	**Parameter Ranks for the Vision Centres**														
	A			D			G			K			M….n		
Months	***a***	***b***	***c***	***a***	***b***	***c***	***a***	***b***	***c***	***a***	***b***	***c***	***a***	***b***	***c***
Door to Door Screening	Average of D2D screening parameter for Vision Centre A – Parameter Rank-3						Average of D2D screening parameter for Vision Centre G – Parameter Rank-6								
Refractions															
Spectacles distributed															
Referred															

Table 5: Selection of the three vision centres

Categories	High Performing					Medium Performing					Low Performing				
Vision Centre Rank based on the median score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

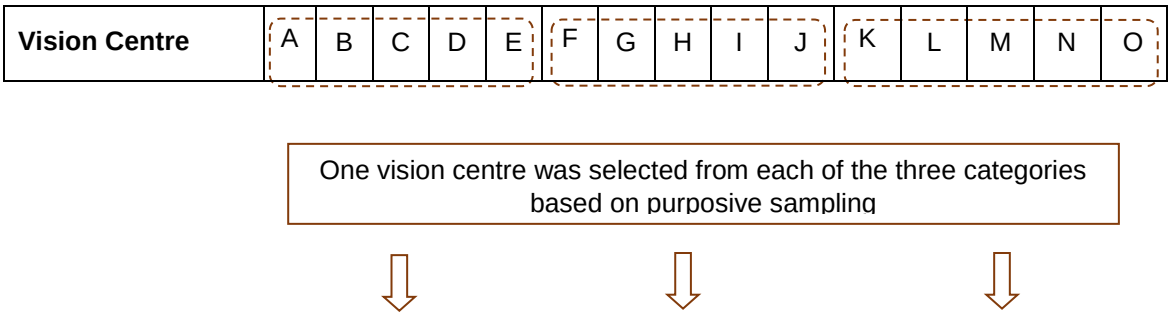


Table 6: Stakeholder wise data collection tools and review parameters

Stakeholder Group	Tool for data collection	Review parameters
Community – Beneficiaries	Semi-structured Questionnaire	1. Adequacy 2. Awareness about the programme 3. Quality of care 4. Impact on health 5. Other impacts
Community – Patients	Structured Questionnaire	1. Awareness about the programme 2. Quality of care 3. Patient satisfaction
Community – Non-beneficiaries	Structured Questionnaire	1. Awareness about the programme 2. Awareness about eye care 3. Attitude towards eye care 4. Practice in terms of availing eye care services
Partner Hospitals	In-depth Interviews	1. Programme Outcomes 2. Experience from the programme 3. Efficiency and effectiveness of the programme 4. Coherence and coordination with relevant stakeholders 5. Sustainability and replicability 6. Relevance
CBO Staff	In-depth Interviews	1. Experience from the programme 2. Efficiency and effectiveness of the programme 3. Coherence and coordination with relevant stakeholders 4. Sustainability and replicability 5. Relevance

Programme Staff	In-depth Interviews	1. Experience from the programme 2. Efficiency and effectiveness of the programme 3. Coherence and coordination with relevant stakeholders 4. Sustainability and replicability 5. Relevance

Table 7: Parameters for information analysis

Parameter	Unit for evaluation	Comments
Relevance	1. Alignment to national and local priorities 2. Alignment to community profile 3. Alignment to Sight Savers Strategic priorities	Primary and secondary data to validate if the programme helped address the unmet need for refractive eye care services for the target population, at affordable costs
Effectiveness	1. No of people covered as compared to the planned	Primary and secondary data to validate the reach of the programme and the relative impact it created on the lives of those benefited
Efficiency	1. Per unit cost for each outcome	Secondary data to validate the per unit spend for IEC, provision of primary eye care services and screening was optimum
Sustainability	1. Funding support vs. revenue generated	Primary and secondary data to validate if the programme is sustainable in terms of generating revenues for itself and fostering change for time to come
Scalability/ Replicability	1. Modular format of units to enhance replicability	Primary and secondary data analysis to validate if the vision centres have ease of replicability and it the current concept can be further optimized to reduce capital expenditure requirements
Impact	1. Output indicators	Existing logframe indicators, along with some additional indicators designed by the evaluator, were used to measure the impact. Impact indicators were measured based on their ability to address to the predictive requirement of the community, due to the absence of a baseline
Coherence/ Coordination	1. Coordination between the different stakeholder groups 2. Coordination among a stakeholder group, i.e. between the two partner	Primary data was analyzed the overall coordination and collaboration between the different stakeholder groups, i.e. Partner organizations, Sightsavers, Government and CBOs

	organizations	

Table 8: Details of the 12th Five Year Plan

Particulars	INR	USD
Recurring expenditure	**2506 Crores**	**418 million**
Cataract surgeries	1475 Crores	246 million
Screening and distribution of spectacles	130 Crores	22 million
Non-recurring expenditure	**472 Crores**	**79 million**
Strengthening district and sub-district hospitals for cataract surgeries	260 Crores	43 million
Vision centre/ primary eye care services	50 Crores	8 million

Table 9: Summary of year wise programme outputs and cost

Year	No. of people reached through IEC	No. of people screened	No. of refractions	No. of spectacles dispensed	Total Cost in USD	Total Cost (Excluding IEC Cost) in USD
Y1	325,124	192,931	15,093	8,512	63,718	55,581
Y2	200,833	300,289	51,001	27,228	89,232	83,968
Y3	70,000	302,859	37,986	21,605	93,761	88,871
Y4	590,797	315,459	42,190	23,985	99,163	88,241
Y5	987,570	104,850	31,078	14,358	101,137	84,841

Ext	3,317,240	10,912	3,224	981	64,651	26,457

No.	Ward	Ward Name	Areas Covered
1	A	Colaba to Metro	Upper Colaba, Middle and Lower Colaba, Fort South, Fort North, and Esplanade
2	B	Dongri	Mandvi, Chakala, Umarkhadi, and Dongri
3	C	Marine Lines	Khara Talao, Kumbharwada, Bhuleshwar, Market, Dhobi Talao, and Fanaswadi
4	D	Nana Chowk (Grant Road)	Khetwadi, Tardeo, Girgaon, Chaupaty, Walkeshwar, and Mahalaxmi
5	E	Byculla	Mazgaon, Tadwadi, 1st Nagpada, 2nd Nagpada, Kamathipura, and Byculla
6	F/N	Matunga	Matunga and Sion
7	F/S	Parel	Parel, Sewri and Naigaum
8	G/N	Dadar	Dadar, Mahim and Prabhadevi
9	G/S	Worli	Prabhadevi, Worli, Chinchpokli, and Lovegrove
10	H/E	Santacruz	Khar Scheme, Hill Road & Turner Road, and Santacruz East
11	H/W	Bandra	Slaughter House, Colwada & Bandra Hill, Pali Hill, Danda, Khar Scheme, Khar and Pali, Hill Road & Turner Road, Santacruz West, Santacruz Central, and Juhu
12	K/E	Andheri (East)	Vile Parle East, Andheri East, Jogeshwari East, Goregaon, and Village Maroshi
13	K/W	Andheri (West)	Vile Parle West, Juhu, Andheri West, Versova, Madh, and Jogeshwari West
14	L	Kurla	(New Mills) Kurla, (Station Takia) Kurla, Swadeshi Mills, Chunabhatti, Khajuribhatti & Kasaiwada, Bazar Church Hall, Naupada, and Seven Villages
15	M/E	Chembur (East)	Chembur Proper, Mahul, Trombay, Govandi, Vadavali, Borla, and Mankhurd
16	M/W	Chembur (West)	Chembur Proper, Mahul, Trombay, Govandi, Vadavali, Borla, and Mankhurd
17	N	Ghatkopar	Ghatkopar, (Kirol) Ghatkopar, Panjrapol, and Vikhroli
18	P/N	Malad	Erangal and Daroli, Malad West, Malad East, Kurar, Dindoshi, Chincholi, Vadhwan, Valnai, Malvani, Akse and Marve, and Manori Island
19	P/S	Goregaon	Goregaon and Village Maroshi, Aarey, Eksar Pakhadi, and Malad (East)
20	R/C	Borivali	Borivali & Shimpoli, Eksar and Mandapeshwar, Gorai and Kulvem, Kanheri, and Magathane

21	R/N	Dahisar	Eksar and Mandapeshwar, Magathane, and Dahisar
22	R/S	Kandivali	Kandivli and Charkop, Poisar, and Akurli
23	S	Vikhroli Bhandup	Vikhroli and Bhandup
24	T	Mulund	Mulund East, Mulund West, Nahur, Tulsi, Gundgaon, Vihar, Sai, and Klerobadi

Table 10: Mumbai wards details[26]

Table 11: Vision centre details[27]

Sr. No.	Supporting NGO	Partner Hospital	Area	Ward	Ward Name
1	Shrusthi Organization	KBHB	Corba Mithaghar, Wadala	F/N	Matunga
2	Mother Theresa Charitable Trust	LCO	Dharavi	G/N	Dadar
3	Pratham	LCO	Transit Camp School, Dharavi	G/N	Dadar
4	Ashtvinayk	LCO	Soneri Garden, Dharavi	G/N	Dadar
5	St. Anthony Church	LCO	Behind Dharavi Post Office, Dharavi	G/N	Dadar
6	Centre for study of social Changes	LCO	Bandra (East)	H/E	Santacruz
7	Shradha Pratisthan	KBHB	Kurla Kamani, Kurla	L	Kurla
8	Rajiv Gandhi Medical Trust	KBHB	Shivajinagar, Mankhurd	M/E	Chembur (East)
9	Bharatiya Kamgar Karmachari Mahasangh	KBHB	Ektanagar, Mankhurd	M/E	Chembur (East)
10	Vidya Vardhini Foundation	KBHB	Chita Camp, Mankhurd	M/E	Chembur (East)
11	Hariharputra Bhajan Samaj	KBHB	P.L. Lokhande Marg, Chembur	M/W	Chembur (West)
12	Coordination Committee of Social Organizations	KBHB	Lumbini Baug, Chembur	M/W	Chembur (West)
13	Sanmitra Trust	LCO	Malvani, Malad (West)	P/N	Malad

14	Child Eye Care Trust	LCO	Charkop, Kandiwali (West)	R/S	Kandivali
15	Kaushalya Samaj Vikas Sanstha	KBHB	Bhandup	S	Vikhroli Bhandup

Table 12: Ward wise HDM, slum population and municipal & government hospitals[28]

Sr. No.	Ward	HDM	Total Pop.	Slum Pop.	% of Total Pop. in Slums	% of Total Slum Pop.	MCGM Hospitals	Govt. Hospitals	Slum Pop. Per Public Facility
1	A	0.58	210,847	60,893	28.9%	0.9%	1	4	12,179
2	B	0.71	140,633	18,746	13.3%	0.3%	0	0	--
3	C	0.89	202,922	0	0.0%	0.0%	0	0	--
4	D	0.96	382,841	38,077	9.9%	0.6%	0	0	--
5	E	0.54	440,335	52,230	11.9%	0.8%	4	4	6,529
6	F/N	0.41	524,393	304,500	58.1%	4.7%	0	0	--
7	F/S	0.67	396,122	141,653	35.8%	2.2%	1	0	141,653
8	G/N	0.49	582,007	324,886	55.8%	5.0%	0	2	162,443
9	G/S	0.66	457,931	151,506	33.1%	2.3%	1	0	151,506
10	H/E	0.47	580,835	457,622	78.8%	7.1%	1	1	228,811
11	H/W	0.68	337,391	138,541	41.1%	2.1%	1	1	69,271
12	K/E	0.67	810,002	472,226	58.3%	7.3%	0	1	472,226
13	K/W	0.66	700,680	316,065	45.1%	4.9%	1	0	316,065
14	L	0.29	778,218	658,972	84.7%	10.2%	1	0	658,972
15	M/E	0.05	674,850	523,324	77.5%	8.1%	2	0	261,662
16	M/W	0.33	414,050	283,557	68.5%	4.4%	1	1	141,779
17	N	0.52	619,556	435,009	70.2%	6.7%	1	0	435,009
18	P/N	0.47	798,775	508,435	63.7%	7.9%	0	0	--
19	P/S	0.59	437,849	210,591	48.1%	3.3%	1	0	210,591
20	R/C	0.84	513,077	173,160	33.7%	2.7%	1	2	57,720
21	R/N	0.69	363,827	169,662	46.6%	2.6%	1	0	169,662
22	R/S	0.54	589,887	326,235	55.3%	5.0%	2	0	163,118
23	S	0.51	691,227	593,300	85.8%	9.2%	1	0	593,300
24	T	0.76	330,195	116,250	35.2%	1.8%	2	1	38,750
MECC Wards			**5,634,242**	**3,980,831**	**70.7%**	**61.5%**	**8**	**4**	**331,736**
Total			**11,978,450**	**6,475,440**	**54.1%**	**100.0%**	**23**	**17**	**161,886**

Wards with vision centres

Figure 5: Structure and role of different stakeholder groups in the programme concept

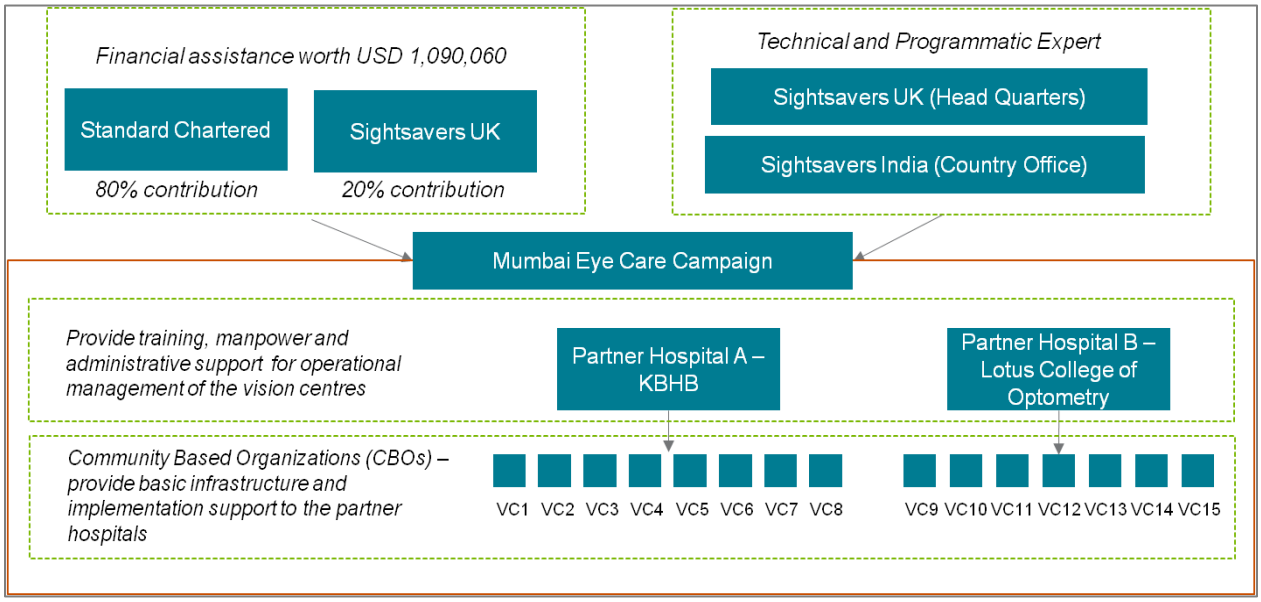


Figure 6: Job profile of respondents

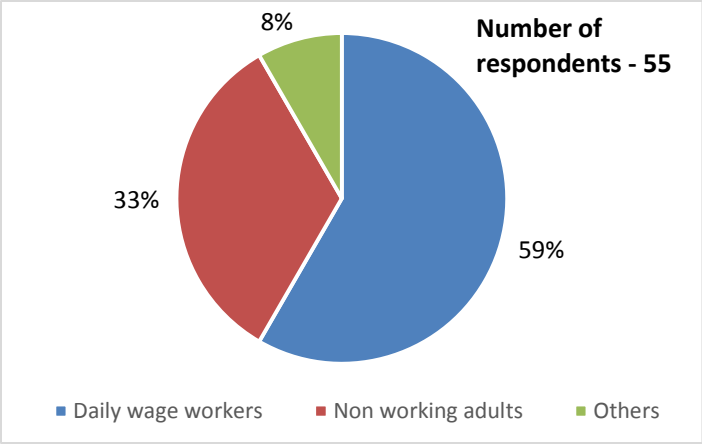


Figure 7: YoY achievement of physical targets

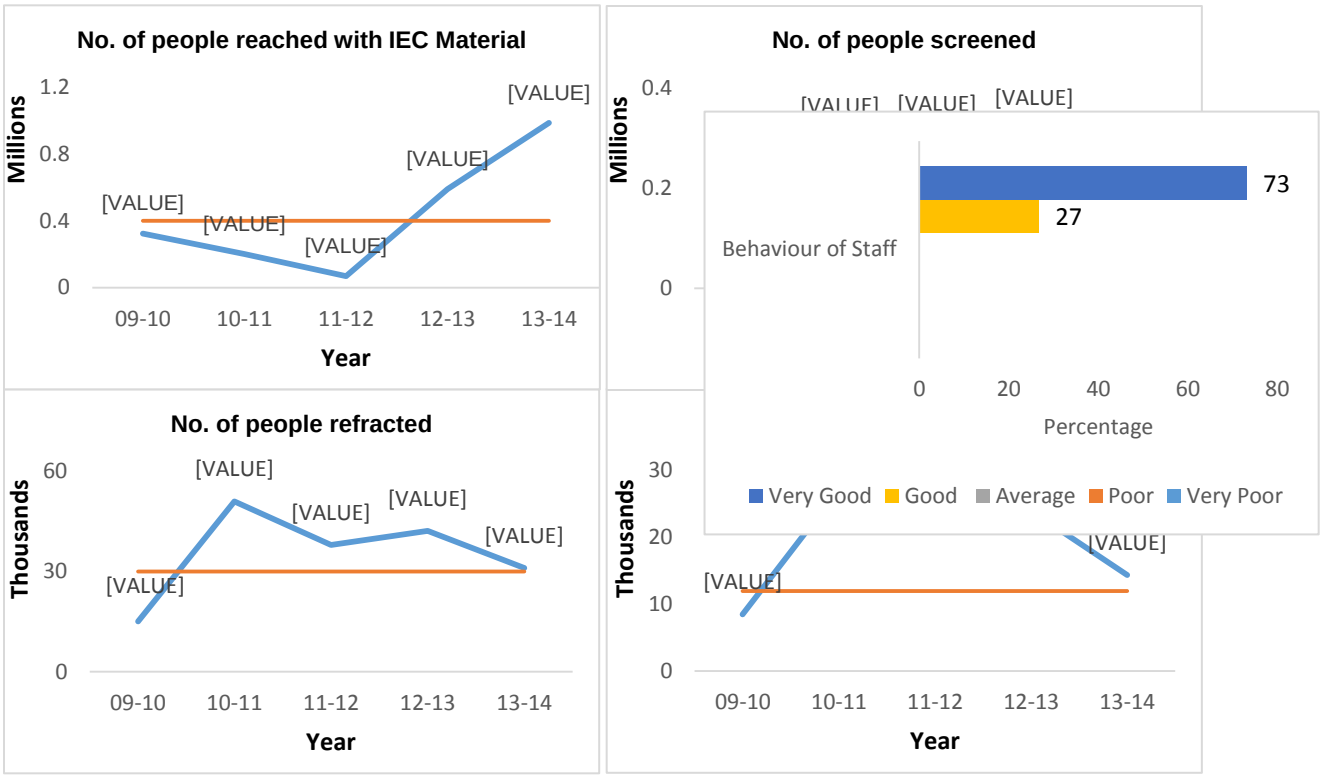


Figure 8: Effectiveness of CHWs

Figure 9: Timeliness of services

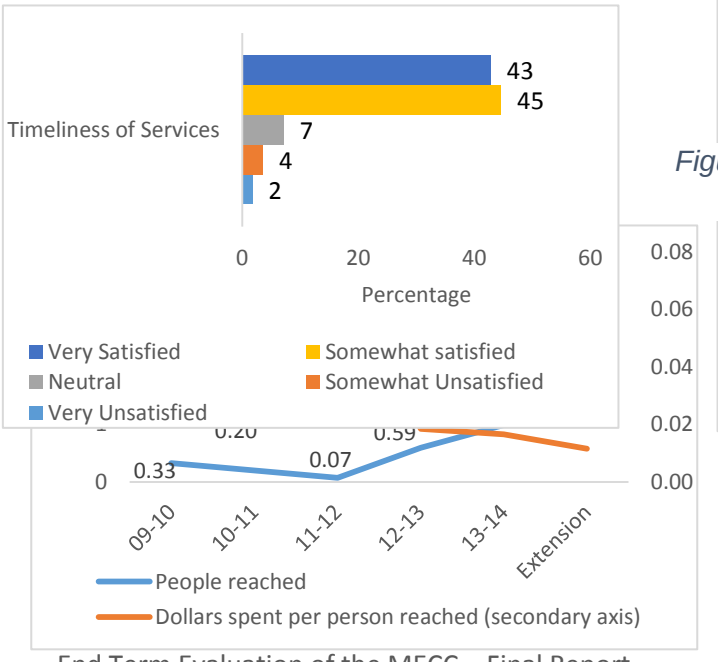


Figure 10: Cost efficiency of IEC campaign

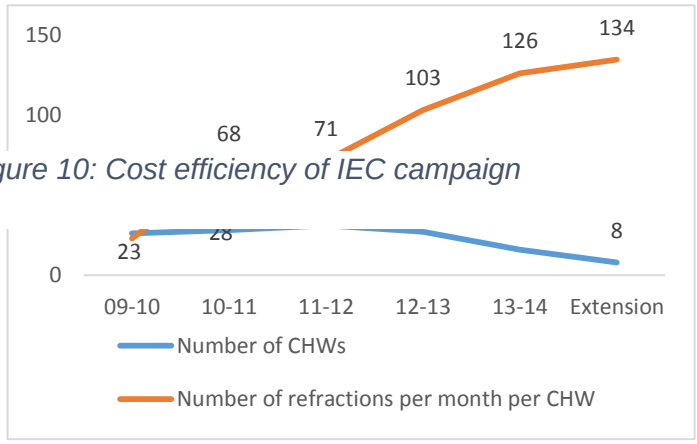


Figure 11: Behavior of service provider

Figure 13: Cost efficiency of spectacles dispensed

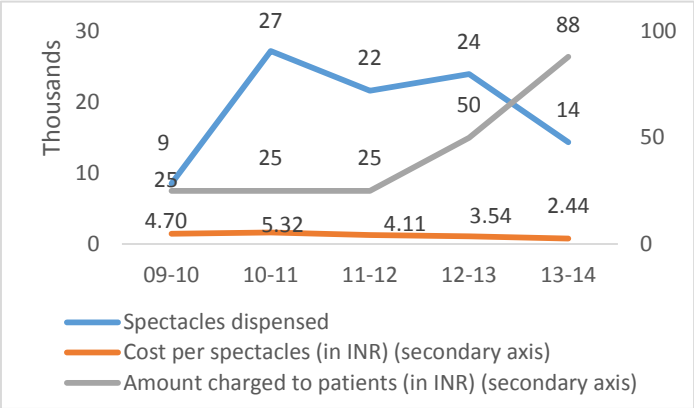


Figure 12: Cost efficiency of screening and refraction

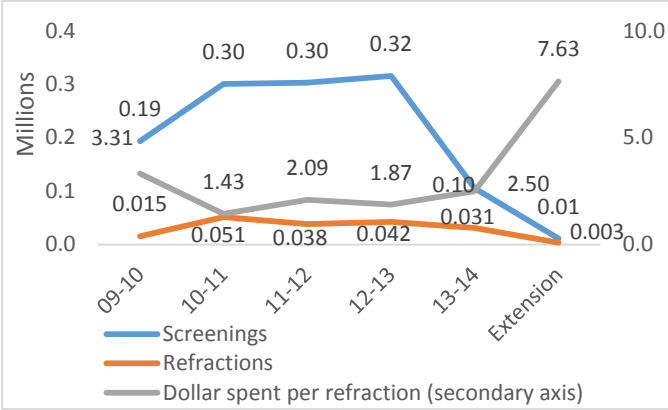


Table 13: Budgeted vs. actual expenditure

Cost Category	Budgeted Expenditure (USD)	Actual Expenditure (USD)	Variance
Organizational Cost (incl. salaries and transport – Sightsavers)	77,719	77,688	0%
Partner Support Cost (incl. salaries and Transport –partner hospitals)	322,399	305,262	(-) 5%
Service delivery cost (Equipment, spectacles and Low vision devices)	547,183	543,877	(-) 1%
Training Cost	23,802	22,062	(-) 7%
Other programme activity cost (incl. IEC)	64,406	83,702	(+) 30%
M&E cost (Monitoring and evaluation costs)	54,553	22,947	(-) 58%
Total	**1,090,061**	**1,055,539**	**(-) 3%**

Source: MECC half yearly reports

Figure 14: Efficiency of capital equipment

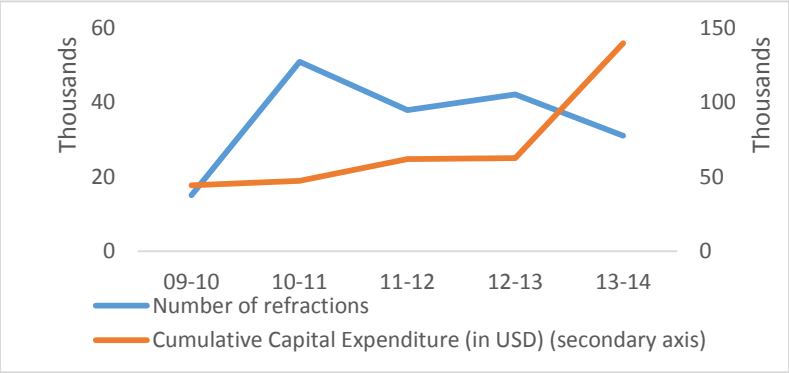


Table 14: Equipment efficiency evaluation

Equipment	Capital Cost (in USD)#	No. of refractions at 90% utilization over 5 years*	Total refractions performed over the period of 5 years per vision centre	Utilization Efficiency
Auto-refractometer	5250	56,160	12,038	21.44%
Retinoscope	478			
Ophthalmoscope	417			
Vision drum/ trial frame & lenses	833			

Source: Equipment details given by Sightsavers
***** Assuming 8 operational hours per day per vision centre, 4 operational days a week and 8 minutes per patient on each equipment

Table 15: Indicators to measure impact and their overall performance

Impact Domain	Indicator	Progress
1. Building Local Capacity and Capabilities	No. of Community health workers trained from within the community	During the course of the programme, 350 community health workers were trained for identification of refractive errors in the community. Discussions with CBO and hospital partners revealed that all the health workers trained were from within the community.
	No. of vision centres established within the community	A total of 15 vision centres were established within the community, 2 of which were closed down by the end of programme. Additionally, these vision centres were equipped with basic and specialized sets of refractive equipment during the tenure of the programme.

Impact Domain	Indicator	Progress
2. Ensuring Accessibility and Availability of Care	No. of operational days per vision centre per week	The vision centres were conceptualized to operate for four days a week to meet the community's need. Most of the vision centres operated for once a week.
	No. of screenings per 1 lac target population	An estimated 30,830[xx] people per 100,000 population within the programme purview were screened.
	No. of people availing primary eye care services per 1 lac target population	An estimated 4,536[xxi] people per 100,000 within the programme purview, were refracted and evaluated for select eye care conditions
3. Creating Community Awareness and Improving Acceptability	No. of people educated about eye care through IEC material	During the course of the MECC programme 5,491,564 individuals were educated through IEC material.
4. Appropriateness – Quality and Comprehensiveness	No. of individuals referred for specialized care	During the programme duration 47,451 individuals were detected and referred for specialized care to higher facilities.
	% of people referred for specialized services availing them	Approximately 52.12%[xxii] of individuals referred, availed advanced services at the two partner hospitals.
5. Benefitting Economically Productive Age Group	No. of people in the age group of 20-59 provided spectacles	An estimated 49,591 individuals, within the age group of 20-59 years were provided with spectacles under the MECC programme.
6. Ensuring Affordable Care to the Needy	No. of people with individuals with no income or unsteady income provided spectacles	An estimated 88,935[xxiii] individuals with no income or unsteady income were provided spectacles.

[xx] This figure was computed using the total number of screenings performed from the MECC Half Yearly Reports (1,227,300 x 100,000 / 3,980,831).
[xxi] This figure was computed using the total number of refractions performed from the MECC Half Yearly Reports (180,572 x 100,000 / 3,980,831).
[xxii] This conversion doesn't take into account individuals that visited facilities other than those of the partner hospitals.
[xxiii] This figure was calculated using the primary data finding that 92% of the interviewed respondents had no or unsteady income (96,669 x 92%). This includes daily wage workers and non-working adults.

Figure 16: Modifications in user charges and restructuring of partnership

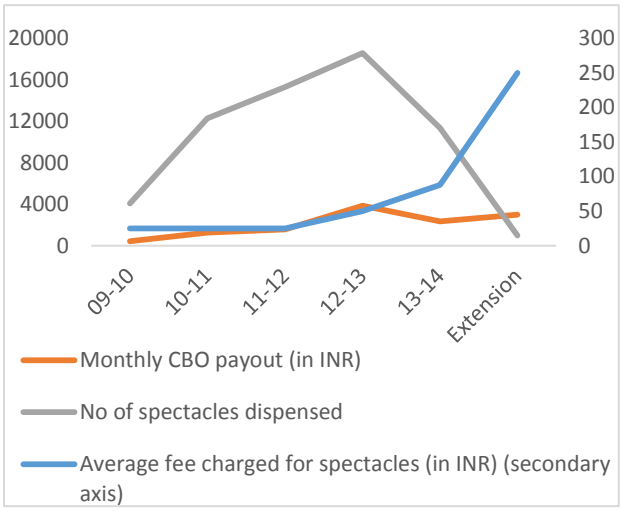


Figure 15: Human resource modifications

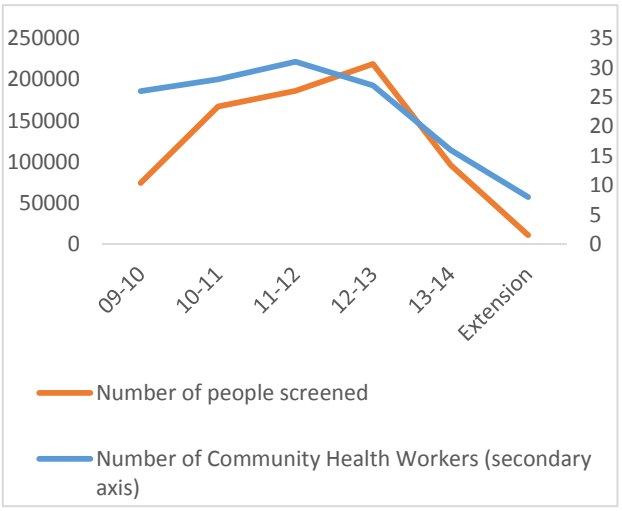


Figure 17: Estimated spectacles conversion rate

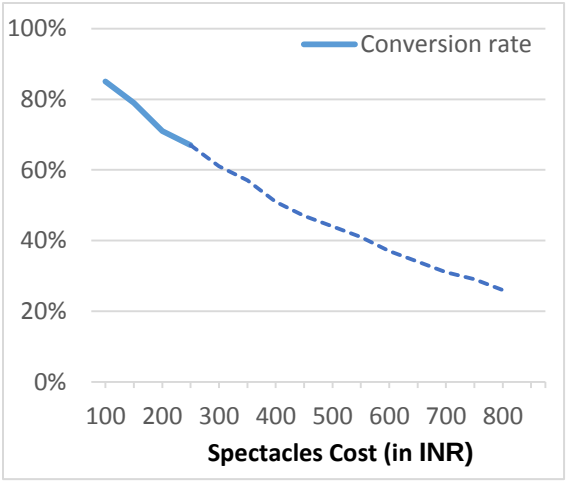


Table 16: Partner organization spectacle rates (USD)

Spectacles	KBHB	LCO
Single vision	1.67	1.17
Near vision	3.58	2.5
Bifocal	5.25	2.5

Table 17: Monthly sustainability gap for partner organizations (vision centre wise)

Parameters	KBHB	LCO
Patients screened	511	149
Patients refracted at the vision centres	166	100
Spectacles prescribed	106	-
Spectacles ordered	51	47
Total revenue generated (USD)	208	144
Cost of running the vision centres (USD)	687	495
Sustainability gap (USD)	479	351

** Data considered is an average for the period Nov 13 - Mar 14 for LCO and Jan 14 - Jun 14 for KBHB*

Table 18: Cost of service delivery

Type of Spectacles	KBHB	LCO
Bifocals	INR 200 (USD 3.33)	INR 100 (USD 1.67)
Readers	INR 100 (USD 1.67)	INR 50 (USD 0.83)

Table 19: Coherence among different stakeholders with reference to the objectives, approach and design of the programme

Objective	Approach and Design	Complimentary Assessment
To create awareness about refractive error and its services amongst people in the slums	• A target of 400,000 individuals reached per annum was set for 2009-14. • Awareness programme through street plays, pamphlet distribution and television advertisements.	• Targets set for IEC reach were low and were not rationalized based on the performance of other activities in the programme. Except for IEC activity, all the other activities over performed from 2010-2012. • IEC strategy was misaligned and hence made little contribution to the overall programme impact. When concerned were raised by the donor over limited IEC activity, IEC activities was sporadically increased to meet the set cumulative requirements. • The methodology to compute IEC reach was not accurate and lacked sound logic. The methodology was unable to measure the change in health seeking behavior, which is an essential output of creating awareness.
To facilitate the establishment of vision centres and refractive error services, through CBO and partner hospitals	• 15 vision centres were operationalized in the slums of the community. • The vision centres were equipped with basic refractive equipment. • The vision centres were conceptualized with a robust referral system to refer patients to partner hospitals for specialized needs.	• The targets set for refractive/ screening services were low when compared to the operational capabilities of the vision centre. E.g. all 15 vision centres, operational for four days a week, could refract ~50,000 a year; however the target set for them was 30,000 refractions. • Most vision centres underperformed since the targets set were for the entire programme and not specifically for the vision centres. Analysis suggested that about 20% of the targets for screening/ refraction were achieved via other activities, i.e. camps and mobile vans.
100% of the target having access to eye care services	• Ensure operationalization of the vision centres for 4 days a week to ensure access.	• The access to refractive services remained constrained as most vision centres operated for only once a week. • A missing baseline assessment clearly hampered the assessment of the success achieved.

Figure 18: Sightsavers' strategy map 2009-13[29]

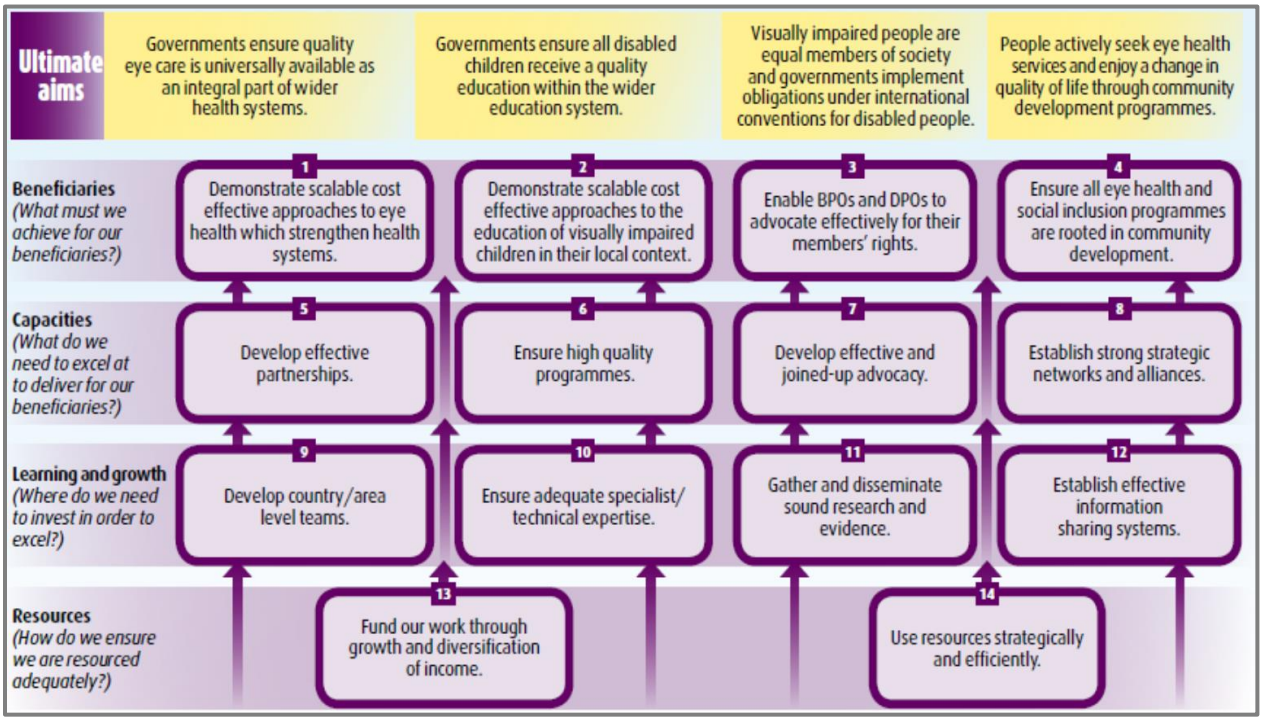


Table 20: Cataract surgeries performed in Maharashtra during 11th Five Year Plan[30]

2007-08		2008-09		2009-10		2010-11		2011-12	
Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
550000	712305	725000	718606	725000	726888	725000	733720	795000	735635

Table 21: NPCB school screening results for Maharashtra during the period 2007-12[31]

	2007-08	2008-09	2009-10	2010-11	2011-12#
Screened	3085307	3559885	3585494	4928671	4023496
Detected with refractive error	115727	97567	99424	110479	99110

 # As on 12th October 2012

Table 22: Rationale for evaluation criteria rating

G	Highly Satisfactory	There is strong evidence that the evaluated initiative ***fully meets all or almost all aspects*** of the evaluation criterion under consideration. The findings indicate a highly satisfactory, largely above average achievement/ progress/ attainment and potentially a reference for effective practice.
GA	Satisfactory	There is strong evidence that the evaluated initiative ***mostly meets*** the aspects of the evaluation criterion under consideration. The situation is considered satisfactory, but there is room for improvements. Achievement/progress/attainment under this criterion is potentially a reference for effective practice. There is need for a management response to address the issues which are not met.
A	Caution	There is strong evidence that the evaluated initiative ***partially meets*** some aspects of the evaluation criterion under consideration. There are issues which need to be addressed and improvements are necessary under this criterion. There is need for a strong and clear management response to address these issues. Evaluation findings are potentially a reference for learning from failure.
AR	Problematic	There is strong evidence that the evaluated initiative is ***borderline in terms of meeting*** the aspects of the evaluation criterion under review. There are several issues which need to be addressed. Evaluation findings are potentially a reference for learning from failure. There is need for a strong and clear management response to address these issues.
R	Serious Deficiencies	There is strong evidence that the evaluated initiative ***does not meet*** key aspects of the evaluation criterion under consideration and is performing poorly. There are serious deficiencies in the evaluated initiative. There is need for a strong and clear management response to address these issues. Evaluation findings are potentially a reference for learning from failure
NE	Not Sufficient Evidence	There is **not sufficient evidence** to rate the evaluated initiative against the criterion under review. The programme needs to seriously address lack of evidence in their initiative.

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Table 23: Target vs. achievement of output indicators

Outputs	Apr 09 - Mar 10		Apr 10 - Mar 11		Apr 11 - Mar 12		Apr 12 - Mar 13		Apr 13 - Mar 14		Apr 14 - June 14		Apr 09 - June 14		% Achieved
	Year 1		Year 2		Year 3		Year 4		Year 5		Extension period		TOTAL		
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	
No. of people reached with IEC materials	400000	325124	400000	200833	400000	70000	400000	590797	713424	987570	0	3317240	2313424	5491564	**237%**
No. of people screened	200000	192931	200000	300289	200000	302859	200000	315459	73728	104850	0	10912	873728	1227300	**140%**
No. of people refracted through vision centres	30000	15093	30000	51001	30000	37986	30000	42190	44520	31078	0	3224	164520	180572	**110%**
No. of spectacles dispensed	12000	8512	12000	27228	12000	21605	12000	23985	18937	14358	0	981	66937	96669	**144%**
No. of optical devices dispensed	500	185	500	727	500	452	500	318	860	354	0	34	2860	2,070	**72%**
No. of community & school screening activities	264	0	264	0	264	0	264	0	264	0	0	0	1320	0	**0%**
No. of district monitoring meetings	4	0	4	0	4	0	4	0	4	4	0	0	20	4	**20%**
No. of health workers trained	120	72	20	115	20	89	20	68	20	6	0	0	200	350	**175%**

5.2 Appendix B: List of Consultations

Table below lists the consultations carried out as part of this evaluation. We consulted with beneficiaries and non-beneficiaries in the community, programme staff, programme managers of the two partners, CBO representatives and community health workers.

Stakeholder	Position/ Designation
Sightsavers India	Programme Manager
	Ex-programme Manager
	Director – Programme Operations
Khan Bahadur Haji Bachooali Eye and ENT hospital (KBHB)	Programme Manager
	MIS Operator
	Optometrists
	Field Supervisor
	Community Health Workers
Lotus College of Optometry (LCO)	Programme Manager
	Optometrists (Interns)
	Community Health Worker
CBOs	CBO Representatives/ President
Community	Beneficiaries
	Non-beneficiaries

5.3 Appendix C: Questionnaires

Consent to Participate in Research

End-Term Evaluation of Mumbai Eye Care Campaign (MECC)

You are invited to participate in a research study conducted by KPMG India Private Limited, who is contracted by Sightsavers for evaluation of MECC.

Your participation in this study is entirely voluntary. You should read the information below and ask questions about anything you do not understand, before deciding whether or not to participate. You are being asked to participate in this study because you are one of the stakeholders of the MECC.

- **PURPOSE OF THE STUDY**

The purpose of this study is to understand the effectiveness of MECC and its approach in reducing avoidable blindness in Mumbai in the programme catchment area, specifically as a result of uncorrected refractive error. The implementers hope to use what they learn from the study to determine the impact and make changes to the programme so that it can benefit more number of people.

- **PROCEDURES**

You will be asked to complete a questionnaire yourself or assisted by someone to complete a questionnaire. Questions will include details about the impact of the campaign, its effectiveness in reducing blindness and possible impediments.

- **POTENTIAL RISKS AND DISCOMFORTS**

We expect that any risks, discomforts, or inconveniences will be minor and we believe that they are not likely to happen. If discomforts become a problem, you may discontinue your participation.

- **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

It is not likely that you will benefit directly from participation in this study, but the research should help the implementers learn how to improve services for people with eye diseases. This study does not include procedures that will improve your physical disability or general health.

- **PAYMENT FOR PARTICIPATION**

You will not receive any payment or other compensation for participation in this study. There is also no cost to you for participation.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained at all times and we will not use your

name in any of the information we get from this study or in any of the research reports. When the study is finished, we will destroy all the information collected from you.

Information that can identify you individually will not be released to anyone outside the study. All data, including questionnaires will be kept in a secure location and only those directly involved with the research will have access to them. We may use any information that we get from this study in any way we think is best for publication or education. Any information we use for publication will not identify you individually.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether or not to be a part of this study. If you volunteer to participate in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer. There is no penalty if you withdraw from the study and you will not lose any benefits to which you are otherwise entitled. The investigator may withdraw you from this research if your participation is found to be redundant.

- **IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact:

Dr. Sushant Patel
KPMG India Private Limited
022-30901558
sushantpatel@kpmg.com

Arti Bhandari
Sightsavers India
022-28826450
artimecc@gmail.com

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Name of Respondent

_____ _____

Signature of Respondent Date

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Interview Guide for General Community

A. General Awareness

1. Are you aware of the activities of the CBO in your area? If yes, what are the activities you are aware about?

Activity A	Activity B	Activity C	Activity D

2. Have you or a family member used any of the services provided? If yes, which services were used by you in the past one year?

Service A	Service B	Service C	Service D

3. How do you think these services have benefited you or your community?

4. What services of the CBO do you think are critical for you or your family? Why?

B. Eye Care Services

5. Are you aware of any eye care services provided by the CBO? (Yes/No)
   a. If yes, which services are you aware of?

Health Education	01
Screening	02
Refractive Error	03
Glasses Provision	04
Any other explain……	

How did you come to know about these services?

IEC Material	01
Community Health Worker	02
Referred by someone else	03
CBO referred	04
Any other explain……	

   b. If no, do you think you or your community need eye care services?
      i. If no, where would you go or who would you approach for your eye care needs? (CBO/ CHW/ Hospital/ Clinic – name the hospital/ clinic)

C. General Awareness about Eye Care

6. Are you aware of the common symptoms of eye trouble (Yes/No)? If yes, please mention.
    a. Watering eye
    b. Blurry vision
    c. Burning eyes
    d. Itching eyes
    e. Any other

7. Have you or your family member ever suffered from any of these symptoms (Yes/No)

8. If yes, what did you do when you experienced these symptoms?

Visited a family doctor	1
Take home remedy	2
Visited an eye specialist (Private)	3
Visited an eye specialist (Public)	4
Visited a chemist shop	5
I took some general medicines	6
Did nothing	7
Don't know/Can't say	8
Others	

9. If the answer to Q9 is 1, 3, 4, how much did you pay to avail the services? _____

10. If the answer to Q9 is 1, 3, 4, what was your expenditure on medicines, diagnostics and other medical equipment? _____

11. Do you think it is important to get an eye examination done once a year? (Yes/No)

D. Awareness about the programme

12. Are you aware about the Mumbai Eye Care Campaign or Sightsavers? (Yes/ No)

13. If yes, what do you think are the key activities under the programme?

Treatment of refractive error	1
To improve awareness about refractive error	2
Provide eye glasses	3

Anything else

Interview Guide for CBOs

A. CBO Services

1. Years of operation_____
2. Type of services

A	B	C	D

Population Covered = xx / Geography covered = yy

B. Eye Care Services – Relevance

3. Prevalence of Refractive Error

Children	Adults	Senior Citizen

4. What is the level of awareness for eye care in the community? Has there been a change in the awareness level after the intervention? Please explain the reason for this change?

5. In your opinion, how do you think the MECC programme is relevant to the National Programme for Control of Blindness

6. In your opinion, how do you think the MECC programme is relevant to the Community needs

7. What do you think of the affordability of glasses in the community? Please also provide the market rate and your rate.

Market rates	Our rates

8. What is the level of acceptability of the eye glasses in the community?

C. Eye Care Services – Efficiency/ Effectiveness

9. What are the major eye care related requirements in your community?

Refractive Error Correcting Glass	Cataract Treatment	Glaucoma Treatment	Others (Please specify)

10. Are your CHWs trained? Do they understand the need for eye care services?

11. How do you think the MECC programme has been able to influence the utilization of eye care? (Please rate on a scale of three, 1-Reduced utilization, 2-No change, 3-Improved utilization)

12. Did you face any kind of constraints during the implementation of programme (Yes/No)? If yes, please explain the constraints faced by you

13. What would be your suggestion to make the programme more effective?

Lead - Share resources, Share IEC material, Train CHWs (better outreach)

D. Eye Care – Impact

14. How many people you have covered so far through this initiative? Please also provide the break-up by various activities:
    Awareness_____
    Treatment_____

15. What is the size of the population you cater to? What is the percentage of total population who have benefited from this initiative?

16. What has improved for the affected individuals?
    a. Social inclusion
    b. Better employability
    c. Enhanced income
    d. Better performance in school

17. How did this initiative help other functions of your CBO?
    a. Better acceptability of other services
    b. More reach
    c. Better appreciation by the community
    d. Knowledge of staff improved
    e. Others

E. Eye Care – Sustainability/Scalability/Replicability

18. Can this initiative be easily scaled up? (Yes/No). If yes, please suggest how the initiative can be scaled up.

19. Is this initiative replicable? (Yes/No). If yes, please suggest how and where the initiative can be replicated.

20. Is the initiative sustainable without the funding? (Yes/No). If No, please explain what you think are the possible ways, in which the initiative can be made sustainable, without the funding.

21. Rate the different components in terms of the requirements to scale up (High/Medium/Low)

Infrastructure	Resource Capabilities	Funding Requirements	Operation protocols complexity

F. Coherence/Coordination

22. How do you rate your partnership with Sightsavers? (Please rate on a scale of five, 1-Very poor, 2-Poor, 3-Average, 4-Good, 5-Very Good)

23. How do you rate your partnership with other partners involved in this initiative? (Please rate on a scale of five, 1-Very poor, 2-Poor, 3-Average, 4-Good, 5-Very Good)

24. How do you rate your partnership with State Blindness Control Society? (Please rate on a scale of five, 1-Very poor, 2-Poor, 3-Average, 4-Good, 5-Very Good)

25. Please mention three key advantages of the partnerships under this initiative

26. Please mention three key disadvantages of the partnerships under this initiative

G. Any other suggestions

Sightsavers

Interview Guide for Partner Hospitals

A. Partner Hospital Overview

No. of vision centres	No. of staff deployed for vision centre	Glasses distributed (in last 4 years)	Screening done (in last 4 years)	Total patients referred

No. of referred patients with different complexities in last 4 years

Cataract	Glaucoma	Acute eye care	Others	% of patients treated free	Funding source

B. Partner Hospital Perspective

1. How would you rate the overall programme from the perspective of the following? (High/ Medium/ Low) Please provide reasons for your rating.

Relevance	Effectiveness	Efficiency	Scalability	Sustainability

2. What was the best/innovative aspect of the programme? (in reference to the national goals set)
    a. Community outreach
    b. Sustainability – revenue model
    c. Local resource training (capability development)

3. Which aspect of the programme needs to be relooked at? How would it create a better impact?

4. Has the programme created the impact it intended to (Answer in Yes/No)?
    a. Awareness –
    b. Accessibility –
    c. Affordability –
    d. Appropriateness –

    If no to any of these sub categories, how many years more would be needed to create this impact?

5. How would you rate the overall experience of the programme? (Scale of 1-5) Why?

6. Key suggestions/ constraints related to the programme

C. Post Withdrawal Impact

7. Do you believe that withdrawal of the programme will impact the community? What is the anticipated impact?

8. Which of the VCs will continue to function going forward?

9. Do you have a strategy to continue to work under this programme? How do you plan to do it?

D. Any other comments

Sightsavers

Interview Guide for Programme Staff

A. Programme Coordinator Perspective

1. How would you rate the overall programme from the perspective of the following? (High/ Medium/ Low) Please provide reasons for your rating.

Relevance	Effectiveness	Efficiency	Scalability	Sustainability

2. What was the best/innovative aspect of the programme? (in reference to the national goals set)
    a. Community outreach
    b. Sustainability – revenue model
    c. Local resource training (capability development)

3. Which aspect of the programme needs to be relooked at? How would it create a better impact?

4. Has the programme created the impact it intended to (Answer in Yes/No)?
    a. Awareness –
    b. Accessibility –
    c. Affordability –
    d. Appropriateness –

    If no to any of these sub categories, how many years more would be needed to create this impact?

5. How would you rate the overall experience of the programme? (Scale of 1-5) Why?

6. Key suggestions/ constraints related to the programme

B. Post Withdrawal Impact

7. Do you believe that withdrawal of the programme will impact the community? What is the anticipated impact?

8. Which of the VCs will continue to function going forward?

9. Do you have a strategy to continue to work under this programme? How do you plan to do it?

C. Any other comments

Sightsavers

Interview Guide for Community User

1. Are you aware about the MECC initiative? (Yes/No)

2. If yes, have you utilized any services under the MECC initiative? (Yes/No). If no, stop the interview

3. Where did you avail the services and what were the services used by you?

4. How much did you pay to avail the services?

5. What was your expenditure on medicines, diagnostics and other medical equipment?

6. If you have to rate the quality of services on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

7. If you have to rate the time taken in availing the services on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

8. If you have to rate the behavior of the service providers on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

9. If you have to rate the infrastructure availability in the health facility on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

10. How did the service help you?
    – Feel more healthy now
    - Working Capability has improved
    - Has helped in seeking better employment
    - Has led to more income

11. Does it now allow you to perform functions/ activities better? (Yes/ No). If yes, how does it allow to perform your function better?

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MECC – Patient Satisfaction Survey

Name of the Respondent:	
Location of Vision Centre:	
Age / Sex:	

A. Awareness:

1. How did you first hear about MECC?

1	Word of mouth	
2	Community health worker	
3	Awareness campaign	
4	Other:	

2. What was the reason/problem for visiting the vision centre?

1	Decreased vision	
2	Infection	
3	Squint	
4	Other:	

B. Treatment:

3. How many times have you visited the vision centre?

1	This is the first time	
2	2 times	
3	3 times	
4	More than 3 times	

4. Were you provided spectacles? (Yes/No) If yes, how much time did it take to procure them?

5. Were you referred to an external facility for treatment? (Yes/No) If yes, which facility?

C. Infrastructure/Resources:

6. Was the staff efficient and well trained in providing the required services?

1	Yes	
2	No	

7. Was the equipment/infrastructure satisfactory to cater to your problem?

1	Yes	
2	No	

8. Were you provided enough educational materials/awareness regarding eye care?

1	Yes	
2	No	

D. Post-treatment:

9. Have you been provided relief from your existing problem for which you visited the vision centre?

1	Yes	
2	No	

10. What were the problems/hindrances faced while availing eye care services at the vision centre?

11. Are you pleased/ that such an initiative has been started in your locality?

1	Yes	
2	No	

12. If you have to rate the quality of services on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

13. If you have to rate the time taken in availing the services on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

14. If you have to rate the behavior of the service providers on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

15. If you have to rate the infrastructure availability in the health facility on a scale of five, (1-Very poor, 2-Poor, 3- Average, 4- Good and 5- Very good) how will you rate it?

16. How can the current services/process be improved?

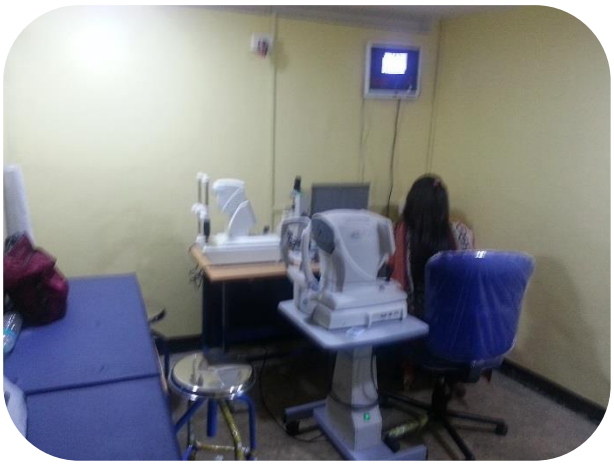
17. What additional services would you want to be added to the existing ones?

5.4 Appendix D: MECC Snapshots

Refractions being performed at a Vision Centre

Exit Interviews at a Vision Centre

Mobile Van Operated by one of the partners



Infrastructure at a Vision Centre

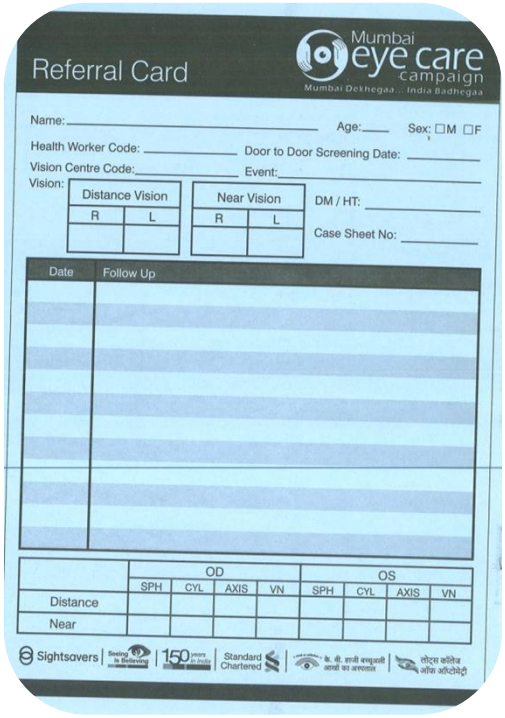
Vision Centre Entry

IEC Material at a Vision Centre

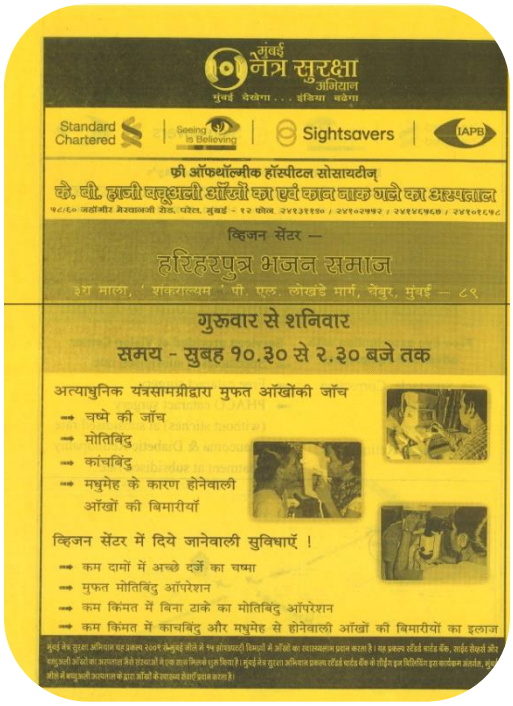
IEC Material at a Vision Centre

Exit Interview at a Vision Centre

Exit interviews at a Vision Centre



Referral Card



IEC Material at one of the Vision Centres

5.5 Appendix E: References

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