

# End of Term Evaluation Report

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## **Paediatric eye care services in Bangladesh** **Reaching the unreachable with paediatric eye care services** **in Khulna division, Bangladesh**

**Project number(s) Bangladesh 71053**

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**Submitted by Tropical Health**  
**Submission of Draft 1: 5 March 2018**  
**Submission of Draft 2: 2 April 2018**  
**Submission of Final: 18 April 2018**  
**Client and project funder: USAID**

# Executive Summary

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## Background Information

Childhood blindness affects an estimated 40,000 children in Bangladesh.<sup>1</sup> An estimated 36% of these cases are treatable (primarily cataracts) and 32% are preventable.<sup>2</sup> Ophthalmologists are not available in all government district hospitals and paediatric eye care facilities are located only at selected tertiary health facilities in urban centres. In addition, awareness of eye health, and the capacity of government community health workers in identification of eye problems and appropriate referral, is low. In April 2016, Sightsavers began implementation of a 23-month, 249,000 USD grant from the USAID Childhood Blindness Programme to provide a systemic solution to childhood blindness in Khulna division.

## Description of project

The project aimed to (1) improve community awareness and enhance capacities for early identification and screening of children with eye health care needs, and (2) support children of ultra-poor communities to access quality eye care services and surgeries. The project planned to train 2,330 people (including school teachers, community health workers and medical personnel) to identify and refer children with eye problems. An estimated 100,000 children were to be screened and a total of 4,110 children were expected to benefit from treatment interventions. The project also supported families to access services by covering their travel costs and surgical expenses. In addition, the project sought to strengthen the integration of paediatric eye care with primary health care, improve referral mechanisms, and enhance linkages with existing rehabilitation and education services. The project was implemented in six south-western, mainly rural districts in Khulna division, which have an estimated 1.1 million children living in poverty. Eight government and non-governmental organisation (NGO) hospital partners were involved in project implementation.

## Purpose of Evaluation

The purpose of this end of term evaluation was to:

- Review the achievements of the project against objectives and outputs.
- Assess the long-term effects made by the project on access to eye health services by girls and the very poor.
- Understand what have been the key successes and challenges in project implementation, and identify specific recommendations to inform future project design.
- Identify any further cross-cutting or organisational level lessons and recommendations.
- Contribute to specific narrative sections of the USAID Project Final Report.

## Evaluation approach and methodology

The evaluation framework covered seven criteria (relevance, effectiveness, efficiency, impact, sustainability, scalability/replicability, and coherence/coordination). Specific evaluation questions were defined under each criterion, guiding the overall scope of the evaluation and data collection. The evaluation was retrospective and used mixed-methods, which included primary qualitative data

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<sup>1</sup> International Centre for Eye Health UK. *Bangladesh National Blindness and Low Vision Survey Report: May 2003*. Dhaka: Sightsavers International; 2003. This was the first survey carried out to identify the causes of childhood blindness and estimated prevalence of CHB at 0.75/1000. Preliminary findings from a more recent survey estimate that the prevalence of childhood blindness has declined to 0.6/1000 children (Source: Unpublished presentation. Prof. Enayet Hossain, "Dissemination seminar on developing a preventive framework for Childhood Blindness in Bangladesh.". 2018. The 2011 Bangladesh Demographic and Health Survey (DHS) estimated 30,000 blind children in Bangladesh.

<sup>2</sup> International Centre for Eye Health UK. *Bangladesh National Blindness and Low Vision Survey Report: May 2003*. Dhaka: Sightsavers International; 2003. See also: Muhit MA, Shah SP, Gilbert CE. Causes of severe visual impairment and blindness in Bangladesh: a study of 1935 children. *The British Journal of Ophthalmology*. 2007;91(8):1000-1004. doi:10.1136/bjo.2006.108019. The first large-scale study of severely visually impaired and blind children in Bangladesh found over two-thirds had avoidable causes.

collection (key informant interviews and focus group discussions), supported by document review and the analysis of existing quantitative data.

The evaluation was carried out in four phases: inception, data collection, analysis, and preliminary dissemination. An Evaluation Team of two consultants (one international Team Leader and one national consultant), supported by Tropical Health's technical and management teams, conducted the evaluation.

Primary data collection was conducted in two of the six project districts. In total, 57 participants contributed to the evaluation. A total of 26 key informant interviews (KII) were conducted with government and NGO stakeholders at national, sub-regional and community levels and four focus group discussions (FGDs) were conducted with school teachers and community health workers. Informed consent or assent was obtained from all informants.

The KII and FGD data were transcribed and key statements were coded in an Excel file, and analysed thematically. Quantitative output data were analysed in Excel to assess performance against project targets. In total, 94 documents were reviewed. Data from all sources were triangulated.

The short timeframe available for fieldwork posed a number of limitations for data collection. Only two of the six project districts were covered and small samples of each stakeholder group were targeted. The active involvement of a wide range of different types of stakeholders and health workers in the project required that we prioritise informants for data collection according to their level of involvement and ability to comment in relation to the specific lines of inquiry. Finally, limited quantitative data was collected under the project. We have nevertheless attempted to assess project outcomes with the available data.

## Main findings

### Relevance

Rating



The project was well-aligned with the National Eye Care (NEC) Plan, existing community service delivery approaches and the Primary Education Development Programme. It addressed recognised system gaps and incorporated programmatic priorities as defined under the NEC Plan. By directly engaging with school teachers and community health workers and introducing paediatric eye care issues at the school/community level, the project also played a valuable role in modelling the translation of policy into practice in the targeted districts. The project appeared relevant to the needs of the target population in the division, which was particularly affected by poverty, inadequate health services and the long-term health effects of the 2009 Cyclone Aila. The project design built upon Sightsavers' previous USAID Childhood Blindness Project, attempting to extend government paediatric services to rural areas, as well as on lessons learned under the 'Bangladesh Childhood Cataract Campaign' (BCCC), which prioritised community-based identification.

### Effectiveness

Rating



The project succeeded in engaging a wide range of community-level actors to increase awareness of eye problems, facilitate early identification of children with eye problems and encourage care seeking. School teachers and religious leaders were viewed as highly influential. The engagement of government Community Health Workers (CHWs) proved challenging in some areas, as the domiciliary CHWs lacked a formal directive to conduct eye care related work. There was consensus across respondents that demand for eye care services had increased in their communities; however, we have little information about changes in parental knowledge, attitudes and behaviour. Counselling

and changing parental attitudes and behaviour appeared to remain challenging. Overall, the project greatly exceeded its targets for numbers of children screened and referred for additional services. The project also largely succeeded in meeting its overall target of providing 49% of screening services to girls, although there was some variation by district. Girls featured as a small proportion of patients referred for cataract surgery. The project developed some new information, education and communication (IEC) materials, providing specific child-focused guidance. Informants widely reported the materials were useful, however, the project did not collect any quantitative or in-depth qualitative data to assess the effectiveness of specific tools. There is little research on paediatric eye care demand in the Bangladesh context on which to base message development.

## Efficiency

Rating



School-based vision testing is an effective and efficient public health approach for screening large numbers of children. Approximately 2% of screened children were identified to have correctable refractive errors. Monitoring teams from Sightsavers' staff assessed school teacher performance, but there was no regular clinical monitoring conducted to measure accuracy compared to a quality control standard. Teachers appeared to be highly motivated to conduct vision testing. The school-based approach contributed to improving early identification of eye care problems, with a mean age of eight years old among primary school children. Considering the number of children screened as the primary output of service delivery, the school-based approach was likely extraordinarily efficient, allowing for high (but incomplete) population coverage. As a result, this approach was not effective for rare case finding. Overall, 76% of referred children received treatment and only 43% of patients referred for cataract surgery received intervention. Service unavailability, geographic barriers and attitudinal barriers all appeared to play a role in failure to complete referral. Potential gaps in the referral pathway included counselling, referral facility distance, counter-referral and follow-up.

## Impact

Rating



The project made an important contribution to increasing the number of trained health workers (meeting project targets for training physicians and CHWs) and also made strides in integrating eye care into primary care service delivery, initiating a pilot of paediatric primary eye care services via Integrated Management of Childhood Illness-Nutrition (IMCI-N) corners at health facilities. A large number of children were able to access eye care services under the project, including a total of 3,839 children who were able to access treatment interventions to reduce visual impairment (3708 children received refractive services and 131 were operated). Overall, the project duration (23 months) was inadequate for the scope and ambition of the project to both establish quality service delivery and to generate demand. Impact was hindered by the lack of paediatric ophthalmologists and overall shortage of ophthalmologists at the district level. The absence of project outcome indicators restricted the Evaluation Team's ability to assess impact.

## Sustainability

Rating



Despite the short project duration, a number of elements have been put in place that are favourable to sustainability. These include the establishment of paediatric screening, referral and follow-up services; capacity building of teachers, government doctors, CHWs, volunteers; increased awareness of paediatric eye care problems across service providers at all levels; increased community awareness of eye care; the development of a patient registry; and the long-term commitment of Sightsavers to the Khulna region. Key challenges to sustainability include the absence of paediatric surgery at district level; limited financial support for referred children; limited availability of refractive services outside hospital; and uncertainty as to whether community-level

actors will continue awareness raising activities over the long term, given competing priorities and patients' diminished access to eye care services.

### Scalability/replication

Rating



School-based vision testing is an established NEC programmatic priority currently being implemented on a small scale in the country. Continued expansion of this approach was viewed favourably at both the national and sub-regional levels. Scale-up of school-based vision testing appears feasible and can be informed by project learning related to course content and duration, quality control standards and mechanisms, and data management and reporting systems. Scale-up would also require attention to refractionist availability for outreach and training and involving students in screening and eye care promotion activities.

### Coherence/coordination

Rating



The project built effective working relationships with district partners and partners widely reported that the project was well-managed. However, in some areas, implementation appeared to be fragmented; there appeared to be a lack of overall project awareness beyond a project actor's specific role. At the national level, the project was well-engaged with the Directorate General of Health Services, but less routinely so with the NEC and National Institute of Ophthalmology and Hospital. This appeared to reflect, in part, need-driven rather than routine government-led coordination of implementing partners and the absence of a regular, formal reporting mechanism. There was no national-level project coordination with the Education sector. Although it was not part of the original project design, Sightsavers utilised complementary resources under its District Eye Care project to engage BRAC Shaystha Kormi to identify and refer cases.

### Conclusions

The project was highly relevant to the needs of the target population and well-aligned with national policies, strategies and programmatic priorities. Overall, the project made some impressive achievements, meeting or exceeding all output targets. (It would have been useful if project output targets were defined in relation to coverage, so as to assess the appropriateness of targets in relation to health system need.) The project succeeded in engaging a wide range of community-level actors to increase awareness of eye problems, facilitate early identification of children with eye problems and encourage care seeking. Given the short project duration, however, it is unclear to what extent the project was able to maximize all these agents of change or how long they will continue to remain engaged following the end of project. Counselling and changing parental attitudes and behaviour also appeared to remain challenging. The project largely succeeded in delivering screening services to girls, although there was some variation by district. Although girls benefited from just over half of all spectacle provision, fewer girls were referred and operated for cataract. Service unavailability, geographic barriers and attitudinal barriers all appeared to play a role in failure to complete referral for surgical intervention. Potential gaps in the referral pathway included counselling, referral facility distance, counter-referral and follow-up. Teachers appeared to be highly motivated to conduct vision testing. Although the school-based approach was clearly effective in screening large numbers of children, further clinical quality control is needed to ascertain the effectiveness (and resulting efficiency).

The project made an important contribution to increasing the number of trained health workers (meeting project targets for training physicians and CHWs) and also made strides in integrating eye care into primary care service delivery, initiating a pilot of paediatric primary eye care services via Integrated Management of Childhood Illness-Nutrition (IMCI-N) corners at health facilities. A large

number of children were able to access eye care services under the project, including a total of 3,839 children who were able to access treatment interventions to reduce visual impairment (3708 children received refractive services and 131 were operated).

Overall, the project duration (two years) was inadequate for the scope and ambition of the project to both establish quality service delivery and to generate demand. The absence of patient-centred outcome indicators also restricted the Evaluation Team’s ability to assess impact. Despite the short project duration, a number of elements have been put in place that are favourable to sustainability. The project built effective working relationships with district partners and partners widely reported that the project was well-managed. Key challenges to sustainability include the absence of paediatric surgery at district level; limited financial support for referred children; and limited availability of refractive services outside hospital.







The project team was also extremely resourceful in adapting new approaches and was fortunate to be able to complement the project interventions by utilising a social mobilisation partner under another project. (Without these human resources drawn from another project to support a door-to-door census, very few cataract cases would have been identified under the project.)

## Recommendations

Recommendation
Community engagement
1. Conduct formative research or exploratory data collection on paediatric eye care seeking behaviours to i) develop an explicit strategic communication strategy, defining targets, influencers, messages and approaches and ii) develop and test messages and community-based communication approaches (e.g. drama, music, community dialogue using local dialects) in future projects.
CHW referral
2. Support policy-level actors (DGHS, NEC) to develop clear directive for government domiciliary CHWs on primary eye care, potentially through revision of job description or essential service package.
School-based vision testing and eye health promotion
3. Support policy-level actors (NEC, MoHFW, MoPME) to formalise school-based vision testing programme: (1) lead a consultative process to revise school teacher training course, resulting in government-approved training (2) harmonise health and education sector approaches around primary eye care, including for health promotion around eye care.
4. Train and include students themselves in school-based vision testing and eye health promotion activities (e.g. "Little Doctors" (peer educators) and student council members) to maximise benefits.
Health worker training
5. Conduct a detailed review of the training approaches utilised under the project to identify areas for improvement, including the scope of curriculum and course duration.
6. Revise health worker training implementation plans to address: training of trainers (including recruitment of trainers with specific training of trainers (ToT) capacity); continuous training needs (refresher training, new staff training, continuous learning for quality improvement for ophthalmologists); the involvement of HW supervisors as trainees/trainers (support monitoring/supervision role); and consider utilising a cascade training model that would help link

Recommendation
various actors under the project and reinforce existing supervision schemes (i.e. all supervisors should also be targeted for training).
7. Incorporate a full module on patient communication and counselling techniques in service provider training (messages, counselling techniques, referral plan) and adjust course duration accordingly. Findings from formative research or explorative data collection on paediatric eye care seeking behaviours (see Recommendation 1) could inform the content of this module.
<b>Quality assurance</b>
8. Allocate budget and human resources for clinical quality monitoring (including of school teacher screening) and develop plan for supportive supervision of front-line health workers (human resource deployment and checklist).
<b>Monitoring &amp; Evaluation (M&amp;E), data management and use</b>
9. Develop logical framework (or other approach) to facilitate causal analysis of how project activities are linked to defined outputs, outcomes and impacts (and examine the underlying assumptions between these linkages).
10. Conduct further quantitative and qualitative investigation and analysis to identify and understand variations in service provision to girls across districts and service levels, with particular attention to cataract screening, referral and surgical intervention. This should include an overall analysis of referral patterns and potential variables affecting referral and referral completion. Based on findings, review implications for target setting and the most effective approaches for increasing access to services for girls.
11. Include patient-centred eye care outcome indicators in project M&E plans (e.g. patient satisfaction, quality of life, clinical outcomes). Include clear indicator definitions, data sources, methods for calculation and for disaggregation by gender and disability. Allocate budget and resources for data collection and analysis, and define how these will be actionable.
12. Develop appropriate data entry systems (field limits, quality controls, IDs/primary keys) for routine patient data, including plans for data cleaning, validation and analysis and link to DHIS2-HMIS. Collect data on the primary identification/referral source in patient registry. Ensure that the electronic collection, storage and use of identifiable patient data adheres to national standards and regulations for protecting patient confidentiality.
<b>Coordination / Governance</b>
13. Improve government-led coordination of eye care actors and harmonisation of efforts by establishing a national level coordination forum for government, NGOs and implementing partners and by requesting quarterly reporting for the government from partners
14. Support policy-level actors (NEC) to develop national guideline on refraction.
15. Support policy-level actors (NEC) to conduct national blindness survey to estimate prevalence and causes of blindness in children for use in planning, developing, and monitoring control programs.
<b>Advocacy (opportunities for sustainability and integration)</b>
16. Continue to engage at the policy level on the integration of paediatric eye care into existing community-based and low-level health facility service delivery approaches (IMCI-N corner at UHCs, future UHC Vision Centres at UHCs, EPI, and CC) and assist NEC and DGHS in the piloting of approaches as appropriate.

## Evaluation criteria rating

	Excellent	<p>There is strong evidence that the project <b>fully meets all or almost meets all aspects</b> of the evaluation criterion under consideration. The findings indicate <b><u>excellent and exemplary</u></b> achievement/progress/attainment. This is a reference for highly effective practice and an Action Plan for positive learning should be formulated.</p>
	Satisfactory	<p>There is strong evidence that the project <b>mostly meets</b> the aspects of the evaluation criterion under consideration. The situation is considered <b><u>satisfactory, but there is room for some improvements</u></b>. There is need for a management response to address the issues which are not met. An Action Plan for adjustments should be formulated to address any issues. Evaluation findings are potentially a reference for effective practice.</p>
	Attention	<p>There is strong evidence that the project <b>only partially meets</b> the aspects of the evaluation criterion under consideration. There are <b><u>issues which need to be addressed and improvements are necessary</u></b> under this criterion. Adaptation or redesign may be required and a clear Action Plan needs to be formulated.</p>
	Caution	<p>There is strong evidence that the project <b>does not meet the main</b> aspects of the evaluation criterion under review. There are <b><u>significant issues which need to be addressed</u></b> under this criterion. Adaptation or redesign is required and a strong and clear Action Plan needs to be formulated. Evaluation findings are a reference for learning from failure.</p>
	Problematic	<p>There is strong evidence that the project <b>does not meet</b> the evaluation criterion under consideration and is performing very poorly. There are <b><u>serious deficiencies</u></b> in the project under this criterion. There is need for a strong and clear management response to address these issues. Evaluation findings are definitely a reference for learning from failure</p>
	Not Sufficient Evidence	<p>There is <b>not sufficient evidence</b> to rate the project against the criterion under consideration. The project needs to seriously address the inability to provide evidence for this evaluation criterion.</p>