EYE CARE ASSESSMENT OF BANGLADESH

The People's Republic of Bangladesh, being the commissioner for oaths to Vision 2020, a global campaign for abolition of avoidable blindness by 2020, formulated a national eye care plan under national council for blind, an apex body under the ministry of health and family welfare. This report illustrates results of the Bangladesh Eye Care Service Assessment Tools (ECSAT)- standardized tool that assesses an eye health system across six 'building blocks' of a health system which is done to assess the Bangladesh Eye Health Services and their integration into the comprehensive health system. Completion of the ECSAT required collaboration with the National Eye Care and DGHS of Bangladesh. A crucial challenge in its completion was the insufficiency of published and unpublished data sources on the various aspects of eye health. In contempt of this challenge, the report provides some pragmatic insights into the Eye health system of Bangladesh, its strengths, weaknesses, opportunities, and gaps. It also illustrates the need for more comprehensive collection of primary data relevant to eye health. Universal eye health coverage is a long-term goal of the Bangladesh public health sector and the Government of Bangladesh has put in place important governance mechanisms to ensure eye health system development and its integration in the broader health system. Eye care planning is led by the National Eye Care, which includes representatives from various public and private entities. There is a National Eye Health Action Plan and a national eye health coordination office under the Ministry of Health. It is however believed that the National Eye Care does not have required resources to effectively perform its function and the National Eye Care (NEC) coordinator has limited influence within the MOH and broader public sector. There is some population-based data on magnitude and causes of visual impairment available for selected districts in the country, where epidemiological surveys were funded by international partner organizations. The health delivery system includes primarily government and not for profit facilities with eight hospitals delivering specialist eye care services across the country. A significant proportion of eye care is provided through community outreach camps and a network of primary and community health workers. The National Cataract Surgical Rate (CSR) is estimated at 2600 per million populations per year, and the system of monitoring quality of cataract surgery remains weak arguably due to high costs of patient follow up. However, the resources allocated to health and subsequently eye health, are inadequate. The government share of expenditure is particularly low and insufficient to cover the costs of majority eye health conditions free of charge. As a result, international donors remain the major source of funding of the Bangladesh health system. Bangladesh has very few accredited institutions that train various cadres of eye care workers and there has been an increase in the number of mid-level personnel trained in the past decade. However, limited financial resources and inadequate infrastructure undermine efforts in both the training and deployment of eye health personnel. There is a critical shortage of all types of eye health cadres with 4 times less surgeons, 2.5 times less ophthalmic clinical officers/nurses and nearly 10 times less optometrists than the minimum recommended levels for South Asia. Bangladesh is yet to develop National Standard Treatment Guideline and an Essential List of Medicine; and there is the Central Medical Store that leads all negotiations and monitoring of procurement prices for eye medicines, medical products and technologies. The evidence from this assessment suggests that although Bangladesh has made some progress towards elimination of avoidable blindness, Vision 2020 goals would be difficult to retain it's progress without further significant investment in eye health. This investment however is likely to be dependent on the overall health expenditure, which is currently inadequate to provide basic services.

Introduction

Vision is the most important sense for human being, and it has a profound and wide spread implication on life, health, sustainable development and economy. Worldwide there are more than 250 million people living with vision impairment, among whom 36 million are blind. (Bourne RRA, Flaxman SR, Braithwaite T, et al. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta -analysis. Lancet Glob Health2017; 5: e888–97.) In addition, over a billion people have near vision impairment, simply because they do not have a pair of reading spectacles. Eye conditions and the vision impairment they cause affect all stages of life, with increasing burden with age. The Eye Care Service Assessment Tool (ECAT) is intended to assist implementation of evidence-based interventions through periodic collection of data and information for assessing the impact of interventions and identify trends and analysis gaps in eye care services at national level. ECSAT is a standardized tool that assesses an eye health system across six 'building blocks' of a health system proposed by the WHO, - (i) governance, (ii) financing, (iii) service delivery, (iv) human resources for health (HRH); (v) medicines and technologies; and (vi) health information and management system (HMIS) (Organization WHO. Eye care service assessment tool. 2016) This report yields guidance for assessing the status and functionality of a country's eye care service on the basis of the six areas of the WHO framework for strengthening health systems.(https://www.iapb.org/resources/eye-care-service-assessment-tool-ecsat/) This report illustrates comprehensive assessment of eye care services at a National Level which ultimately aids in planning and implementation of decisions regarding eye care services. ECSAT also helps to identify gaps with a view to assurance of comprehensive, integrative and top notch eye care service in Bangladesh. ECSAT is also intended to assist implementation of evidence-based interventions, as its periodic completion can provide data and information for assessing the impact of interventions and identify trends and newly emerging needs. These findings can assist in refining and updating national plans and strategies for eye care provision.

Leadership and Governance of Eye Care of Bangladesh

Comprehensive eye care (CEC) encompasses not only treatment of eye diseases, but also prevention, promotion, and rehabilitation of incurable blindness. There is immense paucity for a more holistic and integrated approach involving the health system with it. At present there are many isolated guidelines for eye care but none of them endorsed by national level authorized body. Under the esteemed preeminence of National Eye Care/ IAPB (International Agency for Prevention of Blindness), a nationally accepted guideline yet to be developed for diagnostic and treatment procedures that are provided by primary, secondary and tertiary eye care establishments. Regarding diagnosis and treatment of eye conditions, the range of eye care services specified for Ophthalmologists and Ophthalmic Nurses is endorsed by Ministry of Health. The other allied eye healthcare providers e.g. Optometrists, Opticians works in private sectors but are not legislated by Government. The scope of Ophthalmology practice legally authorized and specified by Bangladesh Medical and Dental Council (BMDC) and on the other hand Ophthalmic Nurse is licensed by state owned Bangladesh Nursing Council.

Eye diseases and visual impairment are very common in developing and less developed countries, affecting up to 20%–25% of the population at any given time. While not all eye conditions require the most advanced treatment facilities, neither can all eye care be addressed by facilities lacking tertiary care expertise and equipment. The concept of primary, secondary, and tertiary levels of care was born out of this observation.

Primary eye care includes a basket of services or activities carried out at community level. Government contributes bulk of Primary eye care services (90%) while Non state actors contribute very little proportions. It also comprises prevention and treatment of the commonest eye conditions and referral for most surgical and advanced treatments (such as cataract and glaucoma surgery). This also covers one or more of the activities such as promoting eye health in the community, screening, case finding and referral, emergency treatment, identifying and referring for rehabilitation those who are already blind, and providing commonly required services like refractive error correction.

Secondary-level eye care is comprises primary eye care services plus surgical services for the commonest eye conditions, such as cataract and glaucoma which is provided by licensed ophthalmologists and aided by Optometrists and other healthcare providers e.g. Ophthalmic Nurses, Ophthalmic Assistants and Opticians that covers comprehensive ocular examination, cataract surgery, simple glaucoma surgery, minor procedures, nonsurgical management of other conditions, and referral to tertiary care for cases that require the attention of subspecialists in ophthalmology and more advanced facilities. Government and Non state actors facilitate majority of the Secondary Eye Care Services while rest of the services is provided by the Private practitioners which is financed by the out of the pocket payments by the patients.

Tertiary eye care services comprise all subspecialty eye care services, including advanced diagnostic, medical and surgical treatment for both children and adults. Facilities for such sophisticated eye care are often available in university hospitals or similar institutions. These centers are staffed by ophthalmic subspecialists and have the capability to provide the complete spectrum of eye care services. Tertiary-level centers also offer training and carry out research on different eye diseases and eye care services at national and regional levels. Government and Private Tertiary Eye care centers provides 95% of services of which 70% is covered by the government at free of charges. When designed and executed properly, this hierarchy in services can ensure both timely and cost-effective treatment, and provides a paradigm intended to ensure that the investments in infrastructure, equipment, and eye care personnel are utilized optimally at all levels. This hierarchical approach has been widely advocated over the last decade since the launch of the global initiative VISION 2020 the Right to Sight, as a valuable design for eye care infrastructure.

In provision for standardization of eye care in Bangladesh, there is a national code of conducts for licensed Ophthalmologists but Optometrists and Opticians are yet to be endorsed by the government as their course curriculum still not has been approved by the State Medical Faculty. Bangladesh have eye care guidelines for screening and eye care services for newborn infants, low birth-weight infants at risk for retinopathy of prematurity and eye screening at school. "National Eye Care"-national association for eye care professionals translate or recommend internationally accepted clinical guidelines for Ophthalmologists and other eye care professionals, some guidelines have legal bearing in the form of policy or law, such as list those are also endorsed by the government. The line director of National Eye Care (NEC) at National Institute of Ophthalmology (NIO) acts as a coordinator or focal person responsible for the implementation of eye health policies through eye health programs eye health and the

prevention of blindness at the ministry of health. He has the mandate of coordinating all the partners involved in eye health with the aim of avoiding duplication and ensuring that operations conform to the priorities laid out in the National Eye Care Plan. In addition, as this assessment was based on secondary data it was unable to establish whether the eye health strategies and policies are being effectively implemented and reinforced throughout the country. Ministry of Health has conceived Eye Health Plan at National Level which is materialized by National Eye Care and DGHS oversees and keeps track of it. BNCB (Bangladesh National Council for the Blind) keeps an eye on prevention, promotion, and rehabilitation of blindness for the Ministry of Health.

Ophthalmic Society of Bangladesh (OSB), Optometrists' Association of Bangladesh (OAB) has been working for development of Ophthalmologists and Optometrists at National Level. Apart from these organizations there is also some society that works for various eye care cadres in Bangladesh. In addition to the state-run eye health organizations (Bangladesh National Council for the Blind), there are also private and not for-profit subsectors, private for-profit subsector and professional associations such as Bangladesh National Society for Blind, Jatio Ondho Kolyan Somati etc. Apart from local NGOs many INGO (e.g. Orbis International, Sightsavers, Fred Hollows Foundation, Christopher Blind Mission etc.) plays conspicuous role in eradication of visual impairment from Bangladesh.

Bangladesh has made praiseworthy progress towards achieving VISION 2020 goals. Government has put in place important governance mechanisms to guide the eye health sector development and its integration within the broader health system. Bangladesh has a National Eye Care Plan (NECP), which is commensurable with the global strategies for universal eye health coverage. Eye care planning is led by the Bangladesh National Council for the Blind, which includes representatives from various public and private entities, including Disability. People's Organizations. The transcendent coordination between GO and INGO also plays vital role in accomplishment of Vision 2020 goal.

Eye Care Financing

The government of Bangladesh has set aside about 0.05% of total budget approximately £7.9 million spend on national eye care over the next five years—four times higher than the previous budget.(https://www.sightsavers.org/news/2017/06/bangladesh-eye-care-budget/) The money will be used to expand the country's eye care facilities, improve performance at government-funded hospitals and monitor patients more effectively following their treatment. An operational plan, under Health, Population and Nutrition Sector Development Program 2011-2016, with aspiration for eye care strengthening has been incepted and approved by the Ministry of Health.

The government is committed to deliver essential eye care services (e.g. Primary eye care, all types of surgical interventions to restore vision, avail medication at government hospitals) mostly at free of cost while others are paid fully or in part by patients. There are 2 tertiary eye institutions which is dedicated for serving people of all class at free of cost. Only licensed ophthalmologists are eligible to provide eye care services in private practice under supervision of BMDC. Various non-state actors also provide eye care services in the country where eye care services are free for selected individuals. Majority of the treatment cost is being carried out by out of pocket expenditures by the beneficiaries. However, provision of spectacles and assistive devices for visual rehabilitation services are typically not covered by the government.

Government of Bangladesh provides cataract surgery at free of cost whereas average cost of cataract surgery in private practice is around 235\$ and Non-State actors provides at only around 50\$. However, there are also options for low-income citizens to receive surgery for free or at minimal cost in both government and Non-State actors.

Health insurance is not a very common service in Bangladesh but there are some financial institutions that typically cover all eye care services are which ranges from Refraction to intra and extra-ocular surgeries as well as treatment of Retinopathy of Prematurity.

Unfortunately, any cost—benefit analysis studies on has not been conducted on services for prevention of avoidable visual impairment and rehabilitation services, specifically those would influence policy or high-level decision-making in the area of eye care, including rehabilitation.

Eye care workforce

Human resource is one of the three key pillars of the Vision 2020. There appears to be very few national human resource information systems in Bangladesh and the data presented here was compiled from the national deployment records by the NEC. In National Eye Care, eye care cadres comprised of Ophthalmologist, Optometrists, Ophthalmic Nurse and Opticians. Ophthalmologists are medically trained physicians who is registered at BMDC and undergone 2-5 years of post-graduate training on Ophthalmology. Ophthalmologists are the only licensed medical practitioner to treat various eye diseases as well as conduct eye surgeries. BCPS and BSMMU are the prime academic institutions to formulate syllabus and held examinations on Ophthalmology. On the other hand, Optometrist, works under supervision of ophthalmologists at various private eye hospitals, is trained for 1.5 to 3 years at different private institutions. University of Chittagong is the only recognized academic institution who is responsible for preparing curriculum for Optometrists and Opticians. Ophthalmic nurses are working in both government and private eye hospitals. Nurses are trained for 1-2 years and certified by Bangladesh Nursing Council.

Government plans or strategies for the development of human resources for health care have not yet prioritized issue to address. Eye care training institutions (e.g. National institute of Ophthalmology, BSMMU, BIRDEM, Ispahani Islamia eye Institute & hospital, CEITC) involved in preparing government strategies and plans for the eye health workforce are very few in number and majority of them in situated in Dhaka. Every year approximately 30 Ophthalmologists and 20 Optometrists produced. Majority of eye care professionals are trained at Private Institutions. The government is yet to take measures to ensure even distribution and retention of professionals in all geographical areas. There is well-managed, national, government-endorsed, readily available, reliable information system on all health care professionals at national level from any source.

The total number of registered ophthalmologists at BMDC around 1200 and the number of ophthalmologists by subspecialty is not noteworthy. More than half of them are working as general Ophthalmologist and cataract and cornea specialists are next in number. Although, Optometrists are not legally eligible to practice independently but there are modest number of graduate Optometrists who has been trained at University of Chittagong, are working in different private eye hospitals under supervision of Ophthalmologists. The diploma and certified optometrists are greater in number.

Cataract remains the lion's of share of avoidable blindness in Bangladesh. To eradicate cataract related blindness from country "Cataract surgeon" are trained following national level curriculum by BCPS, BSMMU which is defined and accepted by the government.

Continuing medical education is not compulsory but Eye care professionals keeps them updated by attending national and international conferences, seminars, workshops and training programs.

Eye care service provision

Comprehensive eye care services are available in large urban areas; the costs are partly paid by patients. Populations in rural areas have difficulty in accessing services because of cost and/or transportation. Eye care services can be accessed in only a few large urban areas and only to those who can pay.

There 5 tertiary eye care establishments in the country and 4 of them is situated at Capital of Bangladesh and only one is in Chattogram district. To compensate for shortages of specialized eye care services, government have tied up with NGOs and implemented innovative approaches (e.g Outreach program, Telemedicine) to reach peoples of remote areas. There are also patient-centered eye care (e.g. diabetic centers providing multidisciplinary health services, including eye services) at BIRDEM. All medical colleges which is supported and promoted by the government through health strategies or policies.

Cataract is one of major ocular morbidities that contribute to bulk of visual impairments in Bangladesh. To decline blindness due to cataract government availed free cataract surgery at most of the district level hospitals. The total number of cataract operations performed in 2019 in the whole country is around 352,000. The Cataract surgical rate is 2600 per million per year. However, the data regarding Cataract surgical coverage have not been formulated till date.

Cataract surgery services are available mostly in large urban areas which has resulted in geographically inaccessible to many and the surgery cost is a barrier for some. Usually, cataract surgery at government institutions are done on first come first serve basis. However, intraocular lens is implanted during most of the cataract operations and the patients must pay all or part of the cost. Nationally, the quality of cataract surgery services is monitored with Quality assurance by National Eye Care. Around 90% Cataract surgeries performed in the country at Government setting include a 3 day hospital stay (in-patient surgery) on the other hand private settings hospital stay is only 1 day. Despite of the government's initiative towards accessible eye care for eradication of avoidable blindness there is still some gaps in the provision of cataract surgery service or in the uptake of the services by patients which includes Geographical inaccessibility, Unavailability of human resources, Lack of awareness, Lack of counseling, Unaffordability.

Refractive Error contributes a significant number of visual impairments in Bangladesh. Refractive services are provided by both Ophthalmologists and Optometrists on the same day of visit. On an average 4.00 USD is needed to avail a basic good-quality prescription glasses inclusive of lenses and frames. Atrocious health seeking behavior and limited service coverage are the leading barriers of up taking refractive services by the patients of Bangladesh.

Diabetes Mellitus (DM) is a global epidemic with significant ocular morbidity. The global burden of visual impairment due to Diabetic Retinopathy (DR) is on the rise and expected to reach global epidemic proportions in the next few decades. Approximately 6.3% of the population, that is 10.1 million people, suffers from diabetes in Bangladesh, and 25% of these or 2.5 million have diabetic retinopathy (DR). To whip visual impairment due to Diabetic Retinopathy into shape, DGHS espoused national guidelines or programs for detection, treatment, referral, and periodic follow-up of diabetic retinopathy. Patients with diabetes are consigned to go down the line for eye examinations depending upon the severity of the disease. Both the DGHS and Non state actors conduct programs or activities to create awareness among people with diabetes mellitus about the risk for diabetic retinopathy. All types of basic and advanced retinal treatment modules are available in both government and private eye hospitals. There are around 70 retinal lasers available in different hospital settings. All types of retinal laser therapy available at free of cost in government setting but in the private hospitals the patients have to pay 35 USD on an average for retinal laser therapy.

For the prevention and treatment of diabetic retinopathy in the country geographical inaccessibility and unaffordability of treatment modalities poses as major barriers. Furthermore, lack of awareness and counseling is also responsible for assurance of treatment of Diabetic Retinopathy.

Glaucoma, one of the leading causes of blindness, is a chronic optic neuropathy with irreversible but preventable visual field loss and progressive optic nerve damage. (Leske, 08 Jul 2009) The prevention of vision loss and treatment of glaucoma in the country can be achieved by early identification through Screening, increase awareness. Accessible and affordable services related to glaucoma can also cut down the number of visual impairment due to glaucoma. Sadly, there is no national guidelines or programmes for detecting and treating glaucoma. Perimeter is used for standard visual field examination, but it is not adequately available and accessible in Bangladesh. Patients need timely therapy to slow the progression of glaucoma. Regarding the glaucoma treatment, only eye drops are adequately available in the country. The laser procedures, filtering microsurgery is done in very modest in number and is limited within tertiary eye hospitals. The cost is fully or partially covered by government funding or health insurance at government hospitals but in private hospitals patients pays the complete treatment. There is no well-grounded data on estimated prevalence of blindness and visual impairment due to glaucoma in the country at the same time due to lack of resources no authentic data is available on number of glaucoma laser procedures were performed in the country during the past calendar year.

AMD is a disease affecting the central area of the retina (macula) at the back of the eye and it contributes a significant number in visual impairment not only globally but also in Bangladesh. National clinical guidelines for the detection and treatment of age-related macular degeneration are unavailable. Patient can avail treatment in any of Divisional Specialized tertiary eye care centers for management of age-related macular degeneration. Due to scarcity of fund at government hospitals, the cost medication to treat selected forms of age-related macular degeneration (e.g. ranibizumab, bevacizumab) is paid by the patients. The treatment cost for ARMD is free in government setting but in private hospitals patients have to pay around 500USD. Disastrously, Bangladesh is devoid of data on estimated prevalence of blindness and visual impairment due to age-related macular degeneration due to lack of survey on ocular morbidities at national level.

All newborn infants are not possible to be given routine examinations for congenital and other eye conditions because it requires expert health professionals such as obstetricians, neonatologists, or midwives. There is a guideline for routine, periodic eye examinations for children. The screening for eye conditions in pre-school and school conducted in the country is conducted by school sight test program.

The estimated prevalence of blindness and visual impairment caused by retinopathy of prematurity in the country is not available due to lack of resources. There are no guidelines for routine eye examinations of newborn infants at national level also screening and management of retinopathy of prematurity is not endorsed by the government at national level. ROP is an emerging neonatal blinding eye disease but sufficient capacity in the country to provide early treatment of retinopathy of prematurity has not been implemented yet. Although, Are there a very few specialized tertiary eye care centers (e.g NIO&H, Ispahani Islamia eye hospital, BSMMU, CEITC and some private hospitals) for management of retinopathy of prematurity but still the number is inadequate than required. The cost of ROP treatment is within the reach of general people as this is partly or fully funded by the Government and NGOs/ Health Insurance.

There are only 4 Low-Vision Centers in Bangladesh. Any licensed ophthalmologist can prescribe Low Vision Aids. There are referral and communication systems between eye care professionals and others (e.g. schools, general practitioners) for the provision of low-vision aids low-vision services available in Bangladesh. There are a small number of low-vision devices for use with computers available in the country. The cost of Low-Vision Aids is mostly coved by Patients and Non-State actors. There are 5 Rehabilitation services for blind and visually impaired people available in the country.

Among other Ophthalmology subspecialties available in the country are Cornea and anterior segment, Vitreoretina, Uveitis or Intraocular inflammation, Neuro-Ophthalmology, Oculoplasty.

There are 2 cornea banks in the country one is in Dhaka and the other is in Chittagong which abided by a set of rules/ legal requirements for donation and use of corneal tissue which is illustrated in National Organ Transplantation Act by Bangladesh Government.

Essential medicines, medical products and technologies for eye care

MSR List of essential medicines, medical products and technologies for eye care issued by the Ministry of Health MSR lists of essential medicines, medical products and technologies for eye care DGHS is the a list of issued by the DGHS at Ministry of Health. There are also supporting government policy to ensure rational use of the essential medicines, medical products, and technologies. This list is updated in every 3 years interval which is chalked out on demand from end users and promoted by DGHS. DGHS negotiate and monitor procurement prices for eye medicines and approve their domestic use. None of the imported medicines, medical products and technologies can be used without approval by the government. Domestic Pharmaceutical companies contribute bulk of the eye medicines, medical products, or technologies. There are no best practices and case studies for ensuring equitable access to essential medicines for eye care in the country. There are obvious plans to improve equitable access to essential medicines, medical products, and technologies for eye care.

Health information system

Bangladesh has a Management Information System (MIS) on national health which is collected and administered by DGHS. DGHS of MOH regularly publish a national comprehensive health statistics report on its website for seemingly easy access to national health information by individual researchers, research institutions and the public. However, National eye care holds the authority to decide which health data and information will be collected centrally in the country and usually the sources of data remains various eye care establishments of government, private and national or international nongovernmental organizations. National Institute of Population Research and Training (NIPORT) conducts survey in 5 years interval and survey had questions on eye care and eye health included. The centrally collected data and information on eye care and eye health in the country disaggregated by the Sex, Gender, District or other administrative unit, Reporting eye care establishment. But the compliance of the people who provide information is not monitored. According to DGHS, National Health Bulletin is the periodic publication where information on eye care and eye health is routinely collected but it lacks information on the eye conditions in periodic district or national disease surveillance.

Literature Review

A meta-synthesis of eye health system assessments shows that different Sub-Saharan Countries of Africa have used either ECSAT or EHSA (Eye Health System Assessment) tool to assess their overall eye care situation. Across the eight countries, findings show considerable progress and improvements in the areas of governance, organization, financing, provision, and coverage while some weaknesses were found those impede quality eye health service planning and delivery. (Bechange, S., Jolley, E., Virendrakumar, B. *et al.* Strengths and weaknesses of eye care services in sub-Saharan Africa: a meta-synthesis of eye health system assessments. *BMC Health Serv Res* **20**, 381 (2020). https://doi.org/10.1186/s12913-020-05279-2).

Assessment of eye care service is essential part for improvement of service delivery quality at the same time it is also plays a vital role in integration of eye care service into broader health system. Although there are numerous studies on Eye care assessment has been conducted globally but we have reviewed a limited number of very relevant published articles of different countries to have a in depth understanding in this issue. Universal eye health coverage is a long-term goal of a country's public health sector and the Government of Bangladesh has put in place important governance mechanisms to ensure eye health system development and its integration in the broader health system. Eye health is included in the Bangladesh's Health Sector Strategic Plan 2011-2016 and in the Essential Health Package and since its inception, Bangladesh has made significant improvement in all areas whereas other developing countries Kenya, Malawi, Zambia, Mali are still struggling to make an impact on the eye care service. (https://research.sightsavers.org/project/eye-health-systems-assessment-in-various-countries-in-subsaharan-africa/) Similar scenario has also found in Sub-Sahara African countries. Bangladesh has made praiseworthy progression in the field of Cataract, Diabetic retinopathy (DR), Glaucoma and Refractive error management. But Malawi and Sierra Leone have not managed to do due to lack of funding and political stability. (Sightsavers, Rapid Assessment of Avoidable Blindness (RAAB) in Sierra Leone. 2011: Freetown, Sierra Leone)

National Vision 2020 Eye Care Action Plan which is in line with the global strategies for universal eye health coverage, led by Bangladesh National Council for the Blind, an apex body under Ministry of Health and Family Welfare, which includes representatives from various public and private entities, including Disability People's Organizations. The transcendent coordination between GO and INGO also plays vital role in accomplishment of Vision 2020 goal.

Conclusion

The government of Bangladesh, being the signatory of Vision 2020, a global campaign to put an end to avoidable blindness by 2020, has made headway yet noteworthy progress towards achieving VISION 2020 goals. The Government has put in place important governance mechanisms to guide the eye health sector development and its integration within the broader health system. Bangladesh has a National Vision 2020 Eye Care Action Plan which is which is in line with the global strategies for universal eye health coverage. Eye care planning is led by Bangladesh National Council for the Blind, an apex body under Ministry of Health and Family Welfare. However, the Committee also recommends for resource allocation to carry out its mandate. It is indispensable to state that this assessment was limited to the review of the available data, which was very few. More primary data is required for comprehensive assessment of the infrastructure, productivity of eye health personnel and the scope and quality of services available throughout the country. This assessment affirms that despite Bangladesh's momentous progress towards elimination of avoidable blindness, Vision 2020 goals would be difficult to carry on without further significant investment in eye health system strengthening.