

Report on International Expert Group Workshop on Childhood Cataract in Asia



*01- 04 August 2011
Dhaka, Bangladesh*



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The workshop entitled “Expert Group Workshop on Childhood Cataract in Asia” was organized by CSF and Asian Institute of Disability and Development (AIDD), University of South Asia, Dhaka, Bangladesh with the financial support from Foundation Dark and Light, Netherlands. The leaders in pediatric eye care in Asia including pediatric ophthalmologists, low vision experts, eye care program manager, policy maker, counselor etc. congregated the workshop to share expertise and exchange views to shape the eye care in Asia. The primary goal of the workshop was to develop a standard manual for the detection and management of childhood cataract in Asian countries.

This is part of a program of CSF entitled ‘Asian Childhood Cataract Program’ which will also organize training workshops in future to empower program managers, planners and pediatric ophthalmology teams to organize childhood cataract control programs in Asian countries. The manual is being developed as an outgrowth of the workshop that will be used in training programs. As part of the program, a special interest group named “Asian Childhood Cataract Special Interest Group (ACC-SIG) has already been formed to collaborate continuously in reducing childhood blindness due to cataract in Asian countries.

The four day workshop started from August 1, 2011 was held at two venues- Pan Pacific Sonargaon Dhaka Hotel and Professor M A Matin Auditorium at University of South Asia, Dhaka. A total number of 21 experts and observers from seven countries in Asia-Bangladesh, China, India, Nepal, Pakistan, Philippines, and Vietnam attended in the workshop. The name of the experts and observers are listed below:

Experts:

1. **Dr. Nasiruddin Ahmed-** Paediatric Anesthetist, **Bangladesh**
2. **Dr. Kazi Shabbir Anwar-** Paediatric Ophthalmologist, **Bangladesh**
3. **Dr. Nathaniel H. Chan-** Paediatric Ophthalmologist, **Philippines**
4. **Dr Khair Ahmed Choudhury-** Paediatric Ophthalmologist, **Bangladesh**
5. **Dr. Parikshit Gogate-** Paediatric Ophthalmologist, **India**
6. **Prof. Dr. Enayet Hossain-** Paediatric Ophthalmologist, **Bangladesh**
7. **Mr. Md. Johurul Islam-** Programme Manager, **Bangladesh**
8. **Dr. Aynul Islam Khan-** Paeditrician, **Bangladesh**
9. **Mr. Hasan Minto-** Low Vision Specialist, **Pakistan**
10. **Professor Mohammad Muhit-** Childhood blindness and disability expert, **Bangladesh**
11. **Dr. Preethi Pradhan-** Specialist in Counseling, **India**
12. **Prof. P. Vijayalakshmi-** Paediatric Ophthalmologist, **India**
13. **Dr. Baixiang Xiao-** Programme Manager, **China**

Observers:

1. **Dr. Srijana Adhikari-** Paediatric Ophthalmologist, **Nepal**

2. **Mr. Md. Monzurul Alam**- Physiotherapist, **Bangladesh**
3. **Dr. Muhammad Rajib Hossain**- Medical Officer, **Bangladesh**
4. **Prof. M A Matin**- Ophthalmologist, **Bangladesh**
5. **Dr. Vo Thi Chinh Nga**- Paediatric Ophthalmologist, **Vietnam**
6. **Dr. Niranjan K Pehere**- Paediatric Ophthalmologist, **India**
7. **Mst. Afroza Parvin**- Research Fellow, CSF, **Bangladesh**
8. **Dr. Phan Thi Anh Thu**- Paediatric Ophthalmologist, **Vietnam**

The discussion of the workshop was focused on whole range of issues including aetiology, prevalence, detection, counseling, referral, surgery, paediatric anaesthesia, post-operative care and follow up, program planning, policy and practice, incorporating childhood cataract into national healthcare work frame. It also projected light on future directions for research in the management of children with congenital/developmental cataracts.

Day-1

The opening day of the workshop was held at Pan Pacific Sonargaon Dhaka Hotel. There was two major sessions. In the morning at 10 AM, the experts delivered their presentations on detection and management of childhood cataract: challenges and current situation in Asian countries: Bangladesh, China, India, Nepal, Pakistan, Philippines, and Vietnam. **Professor Mohammad Muhit** was the moderator of the day.

Prof. P. Vijayalakshmi gave an overview of situation of childhood cataract in India. She presented the magnitude of childhood cataract in India and addressed the challenges and also the ways to overcome these. She said that childhood cataract is the major cause (15 to 30 %) of avoidable blindness and 50,000 children are added every year making a huge burden. She focused on Rubella, the preventable cause of cataract is still existing. There is extreme lack of knowledge and awareness regarding services to prevent and treat childhood cataract. Safe anaesthesia is scarce and there is no nationwide preventive measures or attempt towards early detection.

Dr. Baixiang Xiao explained the situation of childhood cataract in China. She stated the Childhood Blindness Prevalence and causes survey in 2009, using Key Informant Method and it was shown that Prevalence of Blindness: 0.3/1000 (95%CI: (0.2 – 0.5/1000))but importantly no cataract blindness was found. She informed that Paediatric ophthalmologists do strabismus surgeries only and intra-ocular surgeries for children, including childhood cataract are normally referred to the ordinary sub-specialty experts for adults. The current work for childhood eye diseases are mostly focus on RE, low vision and strabismus. The unclear current situation on childhood cataract, leads to estimation difficult. She urged for further study.

Mr. Hasan Minto analyzed childhood cataract, childhood blindness as a whole and discussed the study method to estimate and identify blind children in Pakistan. He stated that among children with eye diseases 10% of OPD is cataract and 30% of operation work is cataract.

Professor Mohammad Muhit revealed the study result of first ever nationwide survey on childhood blindness conducted in 2003 and figured out that there were 12,000 cataract blind children out of 40,000 blind. Many programmes were taken after the study to eradicate avoidable childhood blindness. He also addressed the Key Informant Method to identify blind children in context of Bangladesh.

Dr. Nathaniel H. Chan from Philippines talked about the prevalence of childhood blindness that is 0.06% (26,690) and cataract is 40.8% (16,334). He identified poverty, unequal distribution of paediatric eye care services including ophthalmologists placed in city mostly, lack of support from government and potential stakeholders are the challenges for management of childhood cataract.

Apart from the experts, observers from Nepal and Vietnam presented on the situation of childhood cataract in their own country.

There was 2 group discussions and group work held to summarize the presentation

At 4.30 PM, there was a formal inaugural session held. **Professor Dr. Syed Mudassir Ali**, Advisor to Hon'ble Prime Minister, Ministry of Health & Family Welfare and Social Welfare, People's Republic of Bangladesh graced the event as chief guest. He said that eye care facilities to deal with cataract surgery for children strategies are unequal in rural and urban areas in many Asian countries. We need to detect children from hard to reach areas where vast majority of the population lives and ensure their long term follow-up. This workshop is a great initiative to help eradicate avoidable childhood blindness in Asian countries.

The keynote presentation entitled "Epidemiology of childhood cataract-Global and Asian perspective" was delivered by **Professor Mohammad Muhit**, Honorary Executive Director of CSF and Pro-Vice Chancellor, University of South Asia, Dhaka. He expressed "There is a dire need to utilize effective and efficient method to identify cataract blind children from rural parts of Asia – particularly in large population Asian countries – China, India, Pakistan, Bangladesh, and Indonesia etc. The vast majority of children in the region remain undetected by health professionals until they reach the age of 8 to 10 years, by that time many of them develop irreversible visual impairment, amblyopia or lazy eye. There is good example of projects in different parts of Asian region, which needs to be shared, synthesised and documented so that more effective and large scale programme can be developed in Asian countries to tackle childhood cataract and to eliminate childhood blindness from this cause."

Prof. M. A. Matin, Vice Chancellor, University of South Asia, Former Deputy Prime- minister & Ophthalmologist, **Prof. Deen Mohammad Nurul Huq**, Director, National Institute of Ophthalmology & Hospital, Line Director, National Eye Care, Bangladesh, **Prof. P. Vijayalakshmi**, Chief, Paediatric Ophthalmology & Adult Strabismus Department, Aravind Eye Hospital, India, **Dr. Zereen Khair**, Country Manager, The Fred Hollows Foundation were present as special guests.

People from most NGOs working with eye care services and ophthalmologists from different eye hospitals, media personnel were present in the event.

Professor A. H. Syedur Rahman President of CSF will preside over the session.

Day-2

From the 2nd day and onwards, the workshop was held at Professor M A Matin Auditorium at University of South Asia, Dhaka. 2nd day started with the detection method specially Key Informant Method (KIM). **Professor Mohammad Muhit** was the moderator of the day.

Professor Mohammad Muhit delivered presentation on KIM. He stated that KIM is an important community approach that is used for case finding. The KIM identifies prominent and respected members of local communities such as teachers and Imams to undertake a short training course in their area on how to identify blind children. These volunteer Key Informants (KI) then compile lists of visually impaired and blind children in their respective communities with support of Community Mobilisers (CM). This method has been tested against the door-to-door and was proven extremely effective.

Dr. Baixiang Xiao explained the study to Assess prevalence and courses of childhood blindness in Xiushui County, Jiangxi province, southeast of china using key informant methods. She found the method is very useful for her country's context.

Dr. Parikshit Gogate discussed on various methods of detection of pediatric cataract cases from community. He compared the different approaches like School screening (rural, urban-private, municipal), Outreach camps (pediatric eye care, Anganwadi (kindergarten schools), Pediatric eye care center, School for blind, Vision centers, Red reflex test and Key informant approach. For detection of childhood cataract he showed study results those revealed Pediatric eye care centers (PECC), Schools for the blind are the priority places to find cataract blind children. Outreach camps (SSA, anganwadi), Vision centers and School screening are also effective but relatively less priority approaches to detect childhood cataract. In a nutshell, he said that no single approach is perfect. As there are numerous variations, the combination of approach is the best.

Prof. P. Vijayalakshmi presented on how to assess children with cataract- what is the standard practice. She focused on variability of presentation of a child with cataract. She urged to assess child very carefully before taking any decision to manage or treat cataract. She asked to check the health status of the children, associated ocular and systemic anomalies, inherited disease with complex gene anomalies, metabolic disorders and associated with syndromes and cerebral palsy with developmental delay. In order to assess a child, ophthalmologists should take detail history and examine the child thoroughly- general examination, ocular examination including lens morphology with systemic examination for any abnormality. Along with routine investigation, children with syndrome or associated abnormality should be thoroughly investigated before cataract surgery.

Mr. Hasan Minto presented his topic “Assessment of children with visual impairment, low vision” with a video demonstration. The video depicted the first contact with a low vision specialist- detail assessment process, tools like magnifying devices and counseling of the parents.

Dr. Kazi Shabbir Anwar focused on assessment timing, medical assessment specially assessing cataract morphology and treatment according to it. He also shared his vast experience of doing cataract surgery in Bangladesh.

Professor Mohammad Muhit talked on a series of journeys: travel from home to hospital for cataract surgery; from hospital to home after discharge; then again from home to hospital for follow-up on more than one, and often many occasions. He discussed the barriers to cataract services specific to children and proposed a framework for developing comprehensive cataract care based on his experiences in Bangladesh. The main components of his discussions were: Early detection of blind children within households and communities; Eye examination of blind children and referral of children with cataract; Good quality cataract surgery and optical correction; Follow-up care: regular and long-term.

Dr Khair Ahmed Choudhury explained the whole process of referring a child from camp to hospital based on his experience in Bangladesh on CSF’s project. He stated that children with cataract were being identified by key informant and sent to camp for evaluation by an ophthalmologist. After assessment and evaluation the child was sent to facility hospital for investigation and cataract surgery. After the surgery, counseling and the follow up schedule was also given for better outcome.

Dr. Parikshit Gogate discussed on the effectiveness of empowering various type of people who has the potential to disseminate information and identify cataract blind children in the community. These people include Parents / relatives who have an affected child in the family, Primary health centre’s male and female multi-purpose workers in sub-centre, Immunization volunteers, PHC staff, Traditional birth attendants, Pediatricians, General practitioners, Key informants: Men of faith, traditional healers, local leaders, pharmacists, shop keepers. Among them parents of an affected child who has been treated well are the best ‘marketing managers’.

Mr. Hasan Minto showed the flaws and strengthening opportunity in the Referral system from community to healthcare setup. He underscored strong coordination of different organisations doing similar activity and combined work to detect and refer children.

Then there was a Group discussion/work to strengthen referral of pediatric cataract cases, health systems and integration, doctors training, pediatricians training, health worker, Key Informant training.

Dr. Preethi Pradhan described details process of counseling related to pediatric cataract management, implication, challenges and outcome on surgical uptake and follow up with a nice video. She identified lack of awareness, fear of surgery, inconvenient time, doubt about surgical outcome, poverty are important challenges. Effective counseling that explain all the details of procedure, outcome will remove the barriers. She also talked about counseling aid and training of the counselor.

Prof. Dr. Enayet Hossain focused on components of counseling in Asian context. He suggested employing counselor at government level to demonstrate evidence based quality service.

At the end of the day, there was group discussion session held on counseling and barriers to access eye care services.

Day 3

3rd day of the workshop covered a range of clinical issues like Preoperative assessment, pediatric anesthesia, surgical procedure, IOL selection, prevention of post-operative complications and follow up. **Dr. Parikshit Gogate** was the moderator of the day.

Prof. P. Vijayalakshmi discussed on preoperative assessment for surgery. She stated that ophthalmologists should pool the clinical signs and identify the cause. Then assess visual potential on the postoperative visual prognosis and have clear counseling with the parents. Her discussion also included time of surgery, IOL dilemma, planned under correction, pre-operative examination.

Dr. Nasiruddin Ahmed talked on pre-anesthetic check up. His discussion ranged from history taking to laboratory investigation to assess whether the children is fit for surgery or not. He focused on detail history including drug sensitivity taking from child and mother as well, physical examination, routine laboratory examination, consent from parents. Children and mother should be guided and counsel properly about the procedure and fasting guideline before operation. If the child is accompanying by other problems like fever, respiratory infection, coexisting cardiovascular diseases, recent ingestion of food then the surgery is postponed for a certain period. The child is first treated and operation should be performed after the treatment period.

Dr. Kazi Shabbir Anwar projected light on considering differential diagnosis of cataract and association of other ocular diseases like Ptosis, Squint, Microcornea, Corneal opacity, Status of pupil, Retina, Neurological state. He stated that ophthalmologists should decide the surgery after considering all the components of assessment.

Dr. Nathaniel H. Chan shared his experience of cataract surgery in Philippines. He identified the flaws in the system including late detection of cases and poor surgical outcomes, lack of newborn screening program, financial constraints as most of eye care services is in the private setup and cost of surgery is sky high, lack of equipped pediatric eye centers, lack of coordination between the pediatrician, anesthesiologist and the ophthalmologist etc.

Dr. Parikshit Gogate presented on the importance of evaluation and coordination among pediatric ophthalmologist, pediatric anesthetist, optometrist, low vision technician, childhood blindness & low vision. He stated that pediatric ophthalmology is a team approach and every member should evaluate from their side.

Prof. P. Vijayalakshmi discussed about how to standardize surgical set up. She stated that hospital management should anticipate surgical load 5 years ahead. They should ensure proper manpower, equipment, space, continuous quality monitoring. The operation theater layout should be designed with ideal template.

Prof. Dr. Enayet Hossain talked over how to make surgery safe at camp, primary, secondary and tertiary centres. He said following protocol and maintaining good quality in the surgery, we can reduce surgical complications and offer better outcome.

Dr. Nathaniel H. Chan focused on preparing a checklist for safe surgery. He stated that a simple checklist before surgery can make a big difference and reduce complications significantly.

Dr. Parikshit Gogate presented the differences in surgical procedures. He discussed on variation of timing of surgery, types of surgery like SICS/ Phaco, differences in pre-operative procedures like the duration of fasting before surgery, differences in IOL and follow up procedure. He conducted a group work all experts and participants with a questionnaire and tried to unify a single protocol among differences.

Prof. P. Vijayalakshmi explained in detail the surgical procedure. She addressed the challenges, how to decide surgical option when there is associated conditions that make surgery extremely challenging. She also discussed when and how to implant primary and secondary IOL. She showed some of her experience in challenging cases of cataract surgery with standard surgical procedure in a series of videos.

Dr. KaziShabbir Anwar presented techniques for managing common complications of cataract surgery with some videos. He urged surgeon to be careful in every case including a simple one as challenges may come at any point of surgery.

DrKhair Ahmed Choudhury presented a topic entitled “Selection of IOL-what is the best choice”. Before putting an IOL, he stressed on consistency and accuracy of IOL power calculations and accurate measurement of Axial Length and Keratometry by using standard formula.

Dr. Nasiruddin Ahmed who presented one of the most important and unique topics-pediatric anesthesia. He discussed on different methods of anesthesia in cataract surgery. He stated that though general anesthesia with endotracheal intubation is best, intravenous anesthesia with ketamine and atropine also a good option for its cost effectiveness. There is slightly higher risk of complication in comparison to general anesthesia but he shared his numerous cases with ketamine having very little complication.

Prof. P. Vijayalakshmi discussed on surgeons perspective regarding anesthesia. She expressed that a surgeon wants smooth induction and child has no movement during the whole period of surgery and quick recovery. He discussed on advantages/disadvantages of certain drugs that are used by anesthesiologists.

Dr. Nasiruddin Ahmed talked on maximizing the safety and reducing the hazards of anesthesia during and after surgery, ways of managing immediate post- operative complications. He discussed on how to maintain anaesthesia during surgical period, monitoring of vital signs and ideal set up for management of immediate post-operative complications like shivering, vomiting and life threatening laryngeal spasm.

Dr. PreethiPradhan discussed on importance of counseling in post-operative period to maximize the benefit of surgery, complying with medication, spectacles and for follow up. She pointed out the flaws that prevent children from complying with medication, using spectacle and proper follow up. She discussed about the solution with proper counseling.

Prof. P. Vijayalakshmi presented on how to care a child after operation to prevent post-operative complications e.g post capsular opacity, inflammation, infection, development of glaucoma. She also talked on follow up schedule, evaluation and when should the child bring to the surgeon to consult measures for managing complications.

The 3rd day ended with a group discussion and summery presentation to the plenary.

Day 4

Experts discussed on childhood cataract programme planning, policy and practice in the Day 4 or the final day of the workshop. This session was moderated by **Professor Mohammad Muhit**.

At the beginning, **Professor Mohammad Muhit** outlined the planning large scale program to control pediatric cataract blindness in Asian countries- Implementation and evaluation a program with database, forms and tools to use in management of childhood cataract. He talked on the need of comprehensive eye care services for children; evidence based planning with proper research and ways to translate research into policy action.

Dr. Baixiang Xiao shared her experience in China about the challenges in implementing a program. She identified the fissures in the system and pointed out solution to fill that fissure.

Mr. Hasan Minto discussed the topic entitles “How to reach hard to reach through outreach programme”. He pointed out that finding children from hard to reach area should be the main focus as these children are commonly left out of the services. He focused on importance of various outreach programs to find out children from remote areas and ensure their treatment.

Dr. Preethi Pradhan presented on behalf of **Prof. P. Vijayalakshmi** as she couldn't be there for an unavoidable circumstance. In the presentation, the tools for successful program were highlighted with the light of some successful program model in India.

Dr. Nathaniel H. Chan shared his experience of case detection program in Philippines. He discussed on cataract screening at base hospital, community screening, school screening, munting doctor program (little doctor program).

At the end of this phase, **Professor Mohammad Muhit** conducted an excellent group work with a template to exercise program planning on childhood blindness. The template assisted all to collect information for planning a project on childhood blindness. After the group work, group leader presented their group work and proposed project to the plenary.

The 2nd phase of the day was on Policy and practice on childhood cataract management.

Professor Mohammad Muhit discussed on incorporating childhood cataract in health system work frame. He pointed out that vertical interventions are not sustainable and make the health system fragmented and fragile. He underscored on integrated health systems that are more efficient and less costly.

Mr. Hasan Minto stressed on taking policy beyond vision 2020 frame. He focused on integration of primary, secondary and tertiary care along with integration of works done by different sectors is the key to make any health program successful including childhood cataract program.

Mr. Md Johurul Islam showed the gap between policy and practice in his presentation. He stated that many countries have policy but they are not translated in action in many instances. Sometimes, there is fissures in the policy and ultimately resulted in broken health system and failure of program.

Dr Khair Ahmed Choudhury presented on behalf of **Prof. Dr. Enayet Hossain**. The discussion was on strengthening national eye care plan. Strengthening advocacy, development of infrastructure, technology and human resource, improving coordination and partnership and leadership and government commitment and proper monitoring and evaluation was discussed in detailed in the presentation.

The 3rd and final phase of the day was on integration of childhood cataract in child and maternal health.

Dr. Aynul Islam Khan discussed on screening of cataract by pediatrician. He informed that congenital cataract is one of the easily missed components when a child is taken to a paediatrician. He stated that eye examination should be an integral part of child examination by pediatrician. He stressed on using red reflex test of all children during screening and examination and refer them to ophthalmologists.

After this presentation, the experts presented the summary of the workshop with power point, bullet point, flip charts, graph, picture, videos.

In the concluding session, experts and observers were asked to fill up evaluation form and made comment on the workshop. Each experts and participants received certificate, a flash drive containing all the documents in soft version, a bag and a copy of group photo.

Prepared By- Dr Muhammad Rajib Hossain, CSF

