Workshop Report: A VISION 2020 Workshop on Research for Global Blindness Prevention

September 27-29 2010
Lions Aravind Institute of Community Ophthalmology, Madurai India

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1   Introduction

On 27 – 29 September 2010 a VISION 2020 workshop on research for global blindness prevention was held in Lions Aravind Institute of Community Ophthalmology (LAICO) in Madurai India. The meeting was sponsored by the International Association for the Prevention of Blindness (IAPB) and supported by the International Council of Ophthalmology (ICO). The meeting was organised by LAICO and funded by ORBIS, CBM and Sightsavers.

The purpose of the workshop was to develop a research plan and identify priorities which will lead to improved control of avoidable visual impairment and blindness over the next ten years and towards the goals of VISION 2020, The Right to Sight. Expected outcomes of the meeting were:

1. Prioritized list of research areas and topics with an action plan for taking it forward
2. Action Plan and road map for strengthening research capacity in low and middle income countries.

The thirty two invited participants came from around the world and included Ophthalmologists, Optometrists, representatives of research and training institutes and representatives of INGOs. A list of participants is in Appendix 1.

Workshop process

The meeting was organised and planned by a small working group (see notation in Appendix 1), which provided advice on the agenda, devised the domains of research being considered and selected the experts to present and attend the workshop.

 Participants were welcomed to the workshop by Dr R.D. Ravindran, the Chairman of Aravind Eye Care System. The meeting context was then provided by Mr Peter Ackland, IAPB and Professor Hugh Taylor representing ICO. The meeting was facilitated by Ann Porcino and Thulasiraj R.D as co facilitator.

Day one's aim was to generate a list of possible research themes. Days two and three were focused on determining research priorities - day two sought to identify research priorities and map capacity for research and; day three was designed to develop a plan of action.

2   The methodology for priority setting utilised at the workshop

The majority of the meeting was devoted to determining global and regional research priorities; those research topics which would be most likely to contribute to the achievement of V2020 goals.

Research in the following domains were considered:
- **Basic science (laboratory research):** Molecular biology and applied genetics; immunology; cell biology etc
- **Epidemiology (population research):** Definitions; who is affected in the population; why are they affected (risk factors); what can be done about it (e.g. clinical trials); what evidence is already available (systematic reviews); screening
- **Clinical research (patient/disease research):** Diagnostics; measurement; natural history; treatment outcomes etc
- **Health systems/services (systems research):** Health workforce; medicines/technology; information management; health financing; leadership and governance; service delivery; Access; coverage; quality; safety
- **Health economics:** Economic evaluations e.g. cost effectiveness, cost minimization
- **Impact assessments (consequences):** On individuals (QoL, Patient Reported Outcome measures , economics); on communities (e.g. prevalence)

- **Community development:** Knowledge and awareness; health seeking behaviour; community participation
- **Policy research:** Factors influencing formulation, adoption and implementation

Part 1: Identification of research topics
On the first day of the workshop, a list of potential research topics was generated through the following process:

- **Generation of a list of possible research questions:** Experts in cataract, glaucoma, trachoma, corneal blindness, macular degeneration, diabetic retinopathy, other ocular morbidity, refractive error, low vision and childhood blindness spoke on day one of the workshop, proposing a spectrum of disease specific research questions grouped under the domains suggested (see above) , indicating which ones they felt were priorities and providing the rationale. Workshop participants added to this combined list of disease specific research questions with both disease specific and cross cutting research themes. This process yielded an initial list of approximately 170 research themes.

- **Identification of topics of relevance to different regions:** Small groups reviewed the expert's priorities, identifying the regions of the world where each priority was most relevant and identifying the purpose of each proposed research topic. The end result of this process was lists of potential research topics for each region of the world.

Part 2: Determination of research priorities
Five criteria for evaluating each research question were tested prior to the workshop and agreed upon as shown in the box below.

Criteria for Research Priority Setting
Evaluate each research theme against each criteria on a scale of 1-5, with
1. What is the likelihood that this research would have a major impact on reducing avoidable blindness by 2020?
2. What is the likelihood that this research would improve our capacity to plan and deliver service?
3. What is the likelihood that this research would contribute to greater resources being available for eye care services (eg evidence can be used for advocacy, or results in task shifting, etc)?
4. What is the likelihood that the impact of this research would lead to more equitable health outcomes across the region? (eg research could help all segments of the society and not just the privileged ones or has the potential to improve equity in disease burden distribution in the long term)
5. What is the likelihood of this study being designed and carried out to make a difference by 2020?

The process used to identify priorities is as follows:

- **Scoring regional research themes:** Most workshop participants divided into regional groupings for the second day of the workshop. Each group was given the list of potential research topics identified on day one. Lists varied in length from 120 – 165 topics and most groups therefore opted to consolidate and narrow down the list first, to make the task more manageable. Groups discussed each topic and then gave a score for the topic according to the five agreed criteria. The overall research priority score was then computed by the addition of the five scores and the top 5-10 priorities for each region were thus identified.

- **Scoring cross cutting research themes:** In addition to regional groups, two groups of participants worked to identify research priorities in the areas of health systems and advocacy. These groups started by generating their own list of potential topics, drawn from deliberations on day one, and then rated each possible topic using the same five criteria to come up with the top 5-10 topics in the subject area.

- **Plenary discussion of group priorities:** At the end of the second day of the meeting, regional and cross cutting small groups presented back their proposed priority topics to the full meeting and took questions and discussion from the floor about these. The regional priorities are summarised in the charts shown in Appendix 2 for each of the regions represented at the workshop.

- **Consultation with people unable to attend the workshop:** A number of invited participants from the Eastern Mediterranean and Latin America Regions were unable to obtain a visa to attend the workshop. These people were asked to comment on the priority listing identified by their colleagues who were at the workshop, and the lists for these two regions, shown in Appendix 2, have been adjusted accordingly.

- **Establishing global research priorities:** On day three of the workshop, a small group of workshop participants were identified for their expertise and knowledge to work together to derive a list of the top 10 global research priorities from the 50 or so regional and cross cutting themes that had been identified on day two. In making their recommendations, the group was mindful of the five criteria, and of the research topics which seemed to have precedence across all or most of the regions.

- **Workshop agreement on the global priorities:** The small group presented their list of 10 global priorities back to the full meeting for scrutiny. After discussion and debate the proposed global priorities were agreed to. The selected priorities are shown in section 3 overleaf.

3   Proposed Top Ten Global Research priorities *(no order of precedence is implied)*

Diabetic Retinopathy	• Research to develop and test new paradigms for earlier treatment of DR relevant to resource-poor settings
Diabetic Retinopathy	• Research to develop and test interventions and systems effective in promoting and monitoring life-long adherence to treatment of diabetes and diabetic eye disease within the Non-commuinicable disease (NCD) framework
Open-angle and angle closure glaucoma	• Research to develop low cost and effective modalities and systems for identifying, treating and monitoring glaucoma as well as promoting adherence with care in resource-poor settings
Childhood Blindness	• Research to demonstrate and evaluate a model for populations of up to 10 million at all levels of care which is comprehensive and integrated into child health programs (includes evaluation of interventions to improve referral, uptake, coverage and follow-up)
Low Vision	• Research to evaluate models and content for low vision care across the life spectrum as part of comprehensive health services in resource poor settings
Advocacy /Impact	• Research to demonstrate and disseminate the economic, social and quality of life benefits of eye care to individuals and societies
Health Systems	• Research on the governance and structures within strengthened national healthcare and education systems necessary to optimize the delivery of, and demand for, cataract, trachoma and refractive error services, leading to elimination of blindness and visual impairment from these conditions
Health Systems	• Research on the governance and structures within strengthened national healthcare and educational systems necessary to optimize delivery of, and demand for, comprehensive eyecare services across the life spectrum
Primary Health	• Research on how to create and strengthen the systems for, and determine the benefits of, integrating Primary Eye Health into Primary Health Care and community development approaches
Planning and monitoring progress	• Research to develop and test indicators and information systems to monitor eyecare service outcomes at the program, local, national and regional levels, as part of integrated health management information systems

4   Capacity building for research

A key part of the workshop was to identify gaps in research capacity and strategies to strengthen and support research capacity in all regions, particularly those with the greatest need. Meeting participants identified a number of important gaps in eye health research capacity which they felt most required action:

- the need for more research leaders and thus for formal training programmes to develop research leaders
- the need for current eye health research leaders to be at, or connected with, institutions
- the need for institutional systems which support research leaders (including research infrastructure)
- a lack of adequate mentorship to develop research leaders
- the need for research leaders to have a team with skills in implementing the research and thus the need for training programmes to be linked to potential researchers in all areas of quantitative and qualitative research and in other public health research
- the need to link eye health research institutions with other institutions conducting research in other areas (anthropology, health economics, etc.)
- the need to build the funding base of research institutions (i.e. to create funding networks).

Specific actions were recommended as ways to address the above research gaps, as follows.

1. Conduct a mapping exercise to identify existing research capacity and existing research track record (institutional and individual) region by region. This would be done across all language groups using published papers and other relevant material from the last 5 years and would lead to the identification of potential mentor institutions and individuals and potential mentee institutions.

2. Carry out a needs assessment of the mentee institutions to help guide the capacity building process.

3. Identify the institutions and individuals involved in research training or capacity building.

4. Consider working with the ophthalmologic and optometric societies (and other regional groups) to identify potential research leaders and work with International Council of Ophthalmologists (ICO) and the World Council of Optometry (WCO) to support training.

5. Identify key areas where there is no existing research capacity and where there is priority to develop research capacity and invest in developing institutions and individuals in these areas. (Some small countries may not have a research institution)

6. Map the complementary research institutions (e.g., health economics, public health, anthropology, climate change, management, ecology, policy) at the regional level and determine the capacity of those most relevant to eye health.

7. Identify the groups who can assist institutions to build capacity in translation of research into policy briefs, guidelines, practice, audit, and plans for dissemination and further research.

8. Embark on collaborative research projects (using the priority list in section 3) through mutual decision making.

5 Next steps to take forward the results of this meeting

Workshop participants were keen to see immediate action to build ownership of the outcomes of the workshop and to progress towards conduct of the identified research priorities. Five areas of action following from the workshop were agreed to.

A. Preparing the IAPB Research Agenda and the report of this meeting

1. One member of each regional and cross cutting group to polish the research topics for the final list (by 8 October, 2010)
2. Draft report of this meeting to be written in time for presentation at the IAPB meeting in Geneva (by 10 October, 2010)
3. At the Geneva meeting, disseminate relevant research priority lists to all regions
4. IAPB regions to review and send feedback on the priorities relevant to their regions (lists to be sent to the regional chairs and all members with requests for responses by 10 Nov, 2010)
5. Comments from the regions consolidated and a final IAPB Research Agenda to be prepared by the IAPB CEO (by 30 November, 2010)

B. Dissemination of the Research Agenda and the report of this meeting

The final research agenda and report of this meeting will be widely circulated including through:

- the ICO
- the IAPB website
- Community Eye Health Journal
- IAPB members, who will be asked to share information with their partners
- training and research institutes

Resources should not be identified only for activities of a small group from the North, but should be directed also towards building the research capacity of organisations in the South.

C. IAPB Members to discuss next steps

A meeting in Geneva of INGOs and a small group of researchers will be convened to discuss:

- the outputs of this workshop, possible collaboration / joint funding of projects, etc.
- whether there is a need to develop an IAPB research group.

D. Sourcing funding

Global and regional research priorities will be used as the basis for sourcing funding for the topics ultimately agreed in the IAPB Research Agenda. Potential funders identified for follow up include:

- World Bank – application needs to include operational research funds
- INGOs - possibly through a joint funding pool
- Governments – e.g. DFID / EU / USAID / OZAID / Middle East (IDB / AGFUND)
- Other sources – Wellcome Trust / Gates / NIH/NEI

E. Translation of Research

The workshop identified the need for much greater action to ensure that research is translated to outcomes on the ground. This is a huge area which will require the dedicated attention of a small group. Two workshop participants (Andreas Mueller and Richard Wormald) will prepare a discussion document to prompt thinking and the development of an action plan on this subject.

A VISION 2020 Workshop on Research for Global Blindness Prevention
Participant List
September 27 - 29, 2010

Sl.No	Name	Designation	Organisation	Country
1	Dr. Paul Courtright	Co-Director	Kilimanjaro Centre for Community Ophthalmology	Tanzania
2	Dr. Nathan Congdon	Professor	Zhongshan Ophthalmic Center	China
3	Mr. Peter Ackland *	CEO	IAPB	UK
4	Prof. Clare Gilbert *	Co-Director, ICEH Medical Advisor for SSI	ICEH	UK
5	Dr. G V S Murthy	Dean	Indian Institute of Public Health	India
6	Dr. Richard Wormald	Consultant Ophthalmologist and Senior Lecturer Editor- Cochrane Eyes & Vision Group	Moorfields Eye Hospital and ICEH	UK
7	Dr. Andreas Mueller*	Research Coordinator	The Fred Hollows Foundation	Australia
8	Prof. Jill Elizabeth Keeffe	Professor	Centre for Eye Research Australia	Australia
9	Dr. Andrea Zin	Researcher - Clinical Research Unit	Instituto Fernandes Figueira, FIOCRUZ	Brazil
10	Dr. John H. Kempen	Associate Professor of Ophthalmology and Epidemiology	Center for Preventive Ophthalmology and Biostatistics	USA
11	Dr. Rohit Varma	Professor of Ophthalmology and Preventive Medicine	Doheny Eye Institute/Univ. of Southern California	USA
12	Dr. Wondu Alemayehu	Consultant	Berhan Public Health & Eye Care	Ethiopia
13	Dr. Matthew J. Burton	Senior Lecturer	International Centre for Eye Health	Tanzania
14	Mr. Julian Metcalfe	Director of Advocacy, IAPB	International Agency for the Prevention of Blindness	UK
15	Dr. P. Namperumalsamy	Chairman Emeritus	Aravind Eye Care System	India
16	Mr. R.D. Thulasiraj*	Executive Director	LAICO	India
17	Dr. R.D. Ravindran	Chairman	Aravind Eye Care System	India
18	Dr. R. Kim	Chief - Retina Vitreous Service	Aravind Eye Hospital	India

Sl.No	Name	Designation	Organisation	Country
19	Dr. Daniel Etya'ale	Executive Director (Africa Region)	IAPB	South Africa
20	Prof. Colin Cook	Professor of Ophthalmology Medical Director-CBM	University of Cape Town	South Africa
21	Dr. Winifred Nolan	Consultant Ophthalmologist	Moorfields Eye Hospital	UK
22	Prof. Kovin Shunmugam Naidoo	Global Programs Director Regional Chair-IAPB (Africa)	International Centre for Eye Care Education	South Africa
23	Dr Muhammad Mansur Rabiu	Director Programmes	Prevention of Blindness Union and EMR-IAPB	Saudi Arabia
24	Mr. Johannes Trimmel	Director, International Programme Support and Policies	Light for the World	Austria
25	Ms. Robin Heber Percy	VISION 2020 Workshop Programme Manager	ICEH	London
26	Dr. Hannah Faal	Programme Development Advisor - Health Systems	Sightsavers International	Ghana
27	Dr. Balasubramanium	Director-Research	L V Prasad Eye Institute	India
28	Prof. Hugh Taylor	Professor	Melbourne School of Population Health, The University of Melbourne	Australia
29	Ms. Ann Porcino	Director	RPR Consulting	Australia
30	Dr. Philip A Thomas	Director of Research and Professor of Microbiology	Institute of Ophthalmology, Joseph Eye Hospital	India
31	Dr. Ramachandra Pararajasegaram	Member, Board of Trustees	Sightsavers International	UK
32	Mr. Pankaj Vishwakarma	Head of Programme Development	Sightsavers International	India
33	Dr.Padmaja Kumari Rani		L V Prasad Eye Institute	India

*denotes members of the Workshop Planning Group

Proposed Research Priorities – Western Pacific Region

Topic	Purpose
1. **Diabetic Retinopathy:** Determine timing and cost-effectiveness of laser treatment and follow-up; in particular, develop the evidence base for likely earlier treatment required to avoid loss to follow-up in the developing world	To optimise management of Diabetic Retinopathy
2. **Glaucoma:** Conduct trials of PACG treatments (eg, laser PI for narrow angles, cataract surgery versus trabeculectomy versus combined surgery)	To determine optimal treatments for different stages of the disease
3. **Cataract:** Evaluate interventions to improve referral, uptake and coverage of cataract surgical services in different settings	To increase utilisation of services
4. **Diabetic Retinopathy:** Determine strategies to include diabetic eye care within existing general healthcare systems (such as the Non-Communicable Disease [NCD] System)	To improve quality of treatment
5. **Diabetic Retinopathy:** Develop and test curricula and systems to train personnel to manage different aspects of screening and treatment of diabetic eye disease, test outcomes	To improve quality and reach of health workforce training
6. **Diabetic Retinopathy:** Determine standardized protocols for screening and management, reminder and referral (network) systems to promote long term adherence to treatment, including cost effectiveness	To improve quality of treatment

Topic	Purpose
7. **Glaucoma:** Determine the most practical and cost effective mechanisms for health workforce training in case finding, referral and treatment for PACG and POAG within the context of existing clinical care (to include primary eye care workers, ancillary personnel, and ophthalmologists providing medical and surgical care)	To improve health workforce capacity
8. **Refractive Error:** Determine simplified refractive techniques (e.g. - self refraction)	To increase service delivery coverage
9. **Cataract:** Study factors affecting the variation in quantity and quality of cataract surgery carried out in different settings	To understand and replicate the key factors driving high quantity and quality cataract surgeries
10. **Glaucoma:** Evaluate new laser and incisional surgical techniques for POAG appropriate for use in resource poor areas (low cost tube shunts, express shunt, trabeculoplasty)	To determine optimal treatments for different settings

Proposed Research Priorities – Africa

Topic	Purpose
1. **General:** Determine the prevalence and causes of vision loss in selected areas in Africa where that information is currently absent. Use the data to "map" vision loss and cataract prevalence and to determine desired Cataract Surgery Rates	This data is needed for planning and to monitor the impact of initiatives and programmes
2. **General:** Determine the steps and criteria essential to achieve effective, sustainably funded and managed eye health interventions in different settings in Africa	To understand and improve the sustainability of eye health interventions
3. **Cataract:** Determine the constellation of interventions needed to ensure that people with cataract have access to and use quality eye care services in different environments in Africa. Relevant issues include human resources, management, governance, leadership, financial resources, and others. There will need to be a number of studies to address various components of the models.	To increase utilisation of services
4. **Glaucoma**: Determine the most practical and cost effective methods for case detection, referral, treatment, and follow up of chronic glaucoma in Africa. There will need to be a number of studies to address various components of the models.	Chronic glaucoma is the second leading cause of blindness in Africa. It affects more people at younger age and progresses more rapidly than in other regions/ethnic groups; patients often don't present until one eye is blind. Chronic glaucoma needs to be prioritised, and research is needed to inform programme planning and implementation.
5. **Refractive Error:** Determine the most cost-effective refractive error service delivery models. Refractive error service delivery models will be different for presbyopia and refractive correction in children. For both, it will be necessary to determine the best approaches for ensuring uptake, appropriately trained human resources, availability of spectacles, and service quality.	To inform programme planning and upscale programme implementation

Topic	Purpose
6. **Childhood Blindness:** Determine the most appropriate models for a childhood blindness programme, from identification in the community, to service at a tertiary facility (serving around 10 million), referral back to the community, and follow-up. Studies of interventions to improve coverage, referral, uptake, and follow up will be needed.	To inform programme planning and implementation
7. **Corneal Blindness:** Determine the prevalence, incidence, and aetiology of non trachomatous corneal blindness in different regions of Africa. Determine and test prevention strategies. Determine the most appropriate treatment for microbial keratitis.	To inform programme planning and implementation.
8. **Diabetic Retinopathy:** Test different models for practical and cost effective interventions for screening, case detection, referral, treatment and follow up for diabetic retinopathy.	To inform programme planning and implementation and optimise management of DR.
9. **Trachoma:** Determine the best models for surgical service delivery for trachomatous trichiasis in order to improve outcomes, increase surgery uptake, and improve productivity of surgeons.	To optimise efficacy and impact of surgical therapy
10. **Other Ocular Morbidity**: Determine the spectrum of pathology that presents to eye care facilities in different settings and calculate the burden on the eye health care system. This includes the consumption of services, personnel and training needs. The focus of study should be on those diseases (e.g., trauma, uveitis, vernal keratoconjunctivitis, HIV related eye disease) for which interventions are available and effective.	To advocate for more resources for eye health, and inform programme planning and implementation

Proposed Research Priorities – Latin America

	Topic		Purpose
1	**Cataract:** Collect regional prevalence and incidence data (Mapping)		More data is needed for planning and to monitor impact of initiatives and programmes (RAABs and RACCs)
2	**Diabetic Retinopathy**: Collect regional prevalence and incidence data (Mapping)		More data is needed for planning and to monitor impact of initiatives and programmes (RAABs)
3	**Diabetic Retinopathy**: Demonstrate a health system model for DR programmes		To provide evidence for programme development, policy and advocacy
4	**Refractive Error**: Collect regional prevalence and incidence data (Mapping, rural x urban)		More data is needed for planning and to monitor impact of initiatives and programmes
5	**Refractive Error:** Identify RE program criteria for improved effectiveness		To create a framework for effective programmes
6	**Childhood Blindness:** Demonstrate models for a population of 10 million from community through to tertiary which is comprehensive and integrated		To provide evidence for programme development, policy and advocacy
7	**Low Vision**: Translate successful models to other systems		To fast track replication of best practices
8	**Low Vision**: Comprehensive model of care		To design a service delivery model
9	**Glaucoma:** Develop screening models		
10	**General**: Impact of blindness vs treatment and vision years/DALYS preserved with treatment		

Proposed Research Priorities – Eastern Mediterranean

Topic	Purpose
1. **General**: Economic evaluation for eye care interventions - cataract, refractive error, childhood cataract, diabetic retinopathy etc in comparison to other competing health burdens	A major advocacy tool is to demonstrate the cost effectiveness of eye health interventions over other competing health burdens
2. **General**: What impact has eye care/VISION 2020 had in health inequalities, service utilization and development of health workforce, deployment, retention and distribution	The role of eye health in strengthening health systems and improving general health services through health manpower development and utilisation will be a strong advocacy instrument
3. **Diabetic retinopathy**: Develop cost effective treatments for diabetic retinopathy, including treatment guidelines and what human resources and technologies are the most cost effective?	To identify the most cost effective models for the control of diabetic retinopathy needed for program planning and implementation
4. **Glaucoma**: Practical and cost effective methods for cases detection, referral, treatment and follow up of POAG (including Human resources, promotion, programmatic implementation)	As yet there are no effective community based methods for early detection and treatment of this second major cause of blindness. The research should provide reliable and effective ways to control glaucoma blindness
5. **Cataract**: Evaluation of interventions to improve referral, uptake and coverage	Though we have the technology and know-how to effectively treat cataract, uptake of services has been less than optimal in many places. The research should identify how service uptake can be optimized to provide wider coverage
6. **Refractive Error**: Identify cost effective refractive service delivery models including presbyopia (uptake, human resources, availability, service quality, pricing)	For optimal programme planning and implementation
7. **Childhood Blindness**: Evaluation of incorporating eye health within comprehensive school health programs.	In the spirit of integrating eye health within the main stream general health, research is needed to identify how to effectively include eye health within the school health programs.

Topic	Purpose
8. **Childhood Blindness**: Demonstrate model for child eye health of a population of 10 million, from community to tertiary which is integrated and comprehensive.	Comprehensive child eye health models which can be integrated into the health system are needed for programme planning and implementation
9. **Health Systems**: How does comprehensive eye care provision results in effective primary health care?	Demonstrating the role of eye care in enhancing primary health care will be a good advocacy tool
10. **General:** Appropriate population based studies to estimate magnitude and detailed causes of vision loss in areas where such data do not exist.	For planning and measuring impacts of interventions

Proposed Research Priorities – South East Asia

Topic	Purpose
1. **Low Vision**: Developing and evaluating models (including patient outcomes & QOL) and content for low vision care as part of comprehensive model of care (including threshold for providing services)	To design a service delivery model
2. **Diabetic Retinopathy**: Economic impact, Quality of life and financing: Understand cost structure for screening; cost implications and burden of disability in treating DR compared to not treating DR; how such services can be financed	For advocacy and service planning
3. **Diabetic Retinopathy**: DR Management - Timing of laser treatment, follow-up; low cost systems	To optimise management of DR
4. **Diabetic Retinopathy**: Evaluation of interventions to improve screening and evaluation coverage and referrals to ophthalmologists	To optimise management of DR
5. **Diabetic Retinopathy**: How to incorporate eye exams for diabetic retinopathy in NCD programmes	To improve quality of treatment
6. **General**: Appropriate population based study to estimate magnitude and detailed causes of different visually impairing eye diseases	To provide estimates for planning, monitoring & evaluation of need based eye care services (Suggested tools like RAAB, RARE, RAGE, KIM, etc.)
7. **Childhood Blindness:** Evaluation of incorporating eye health within comprehensive school health programmes, including the child-to-child approach	To ensure holistic approach to child health which is sustainable
8. **Refractive Error:** Impact of visual impairment from RE on QOL measures e.g. Visual Functioning, Spectacle Wear & Work Productivity, Vision State Valuations	To create evidence for advocacy for refractive programmes
9. **Refractive Error**: Impact of programs on prevalence of visual impairment, access to services and changes in economic and educational opportunities	To inform programme improvement and advocacy

Topic	Purpose
10. **Refractive Error**: Economic impact of refractive error correction; Cost benefit and Cost effectiveness of Interventions	To influence policy; to guide selection of service delivery models/ to influence policy
11. **Refractive Error**: To investigate alternate financing systems - for service delivery and spectacles	To increase sustainability of service delivery

Proposed Health System Research Priorities

Topic	Purpose
ACCESS: Determining the effectiveness of Primary level health work force in prevention, detection and referral of eye conditions	This is to lead towards appropriate strategies in varying settings for integrating in the general health system, the case finding process and promoting preventive measures.
ACCESS: Evaluation of interventions to improve referral, uptake and coverage in different settings	To come up with strategies appropriate to different settings that will build the right linkages, collaborations and networks for enhanced referral and compliance to treatment, surgery or follow-up.
QUALITY: Developing a Quality Assurance Process for integration into the regular health service delivery	To move quality assessment from being a periodic effort to an integrated routine activity within the health delivery. It is recognized that quality and satisfaction with the services are powerful drivers of uptake, compliance and also has an impact on costs (lowers).
SCALING: Developing sustainable & replicable models of eye care delivery in different settings that are responsive to the eye care needs	To distil the principles behind successful models to see how these principles can be adapted to settings that are different - culturally, demographic, economic, governance (e.g.: Government vs. NGO), etc.
EQUITY: Investigating equity in eye care delivery	To identify underserved populations and develop appropriate strategies to ensure service to them.

Proposed Advocacy Research Priorities

Topic	Purpose
1. Determine economic evaluation of eyecare interventions in comparison to other competing health burdens: • cataract – age related • refractive errors • childhood cataract • trachoma (i.e. 60-70% of global blindness; all ages and both genders)	To provide data for advocacy through demonstrating the economic and social rationale for increasing resources to strengthening national eyecare programmes
2. Determine total costs and benefits of investing in eyecare, i.e. positive economic rates of return	To demonstrate that investing in eyecare is a good investment from a national development perspective
3. Determine the benefits of eyecare	To provide government and donors reassurance that their investment has positively changed lives and impacted the MDGs
4. Document examples of sustainable eyecare	To demonstrate to donors and governments that eyecare programmes have the potential to be sustainable
5. Document examples of successful programmes	To demonstrate to donors and governments that eyecare programmes have the potential to be successful in terms of the attributes of health systems