
INTERNATIONAL EYE FOUNDATION

"SEEING 2000"
Increasing the Quality and Quantity of
Ocular Surgery in Children
to Ameliorate Childhood Blindness

Fifth Annual Report
October 2000 - December 2001

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ACRONYMS

AAO	American Academy of Ophthalmology
AEH	Aravind Eye Hospital
AIIMS	All India institute of Medical Sciences
BEF	Bulgarian Eye Foundation
BHR	Bureau of Humanitarian Response
CBR	Community Based Rehabilitation
CME	Continuing Medical Education
HH	Health for Humanity
ICEH	International Centre for Eye Health
IEF	International Eye Foundation
LAICO	Lions Aravind Institute of Community Ophthalmology
LHMC	Lady Harding Medical College
LI	Lighthouse International
LVPEI	L. V. Prasad Eye Institute
MG	Matching Grant
NGO	Non-Governmental Organization
NICU	Neonatal Intensive Care Unit
PHW	Primary Health Worker
PVC	Private Voluntary Cooperation
PVO	Private Voluntary Organization
RBI	Resources for the Blind
ROP	Retinopathy of Prematurity
SH	Safdarjang Hospital
UEC	University Eye Clinic
USAID	United States Agency for International Development
VOSH/PA	Volunteer Optometric Services to Humanity/ Pennsylvania
VPEC	Vincent Pescatore Eye Clinic
WEM	World Eye Mission
WHO/PBL	World Health Organization/Prevention of Blindness

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I. Executive Summary

This is the Fifth Annual Report of the International Eye Foundation's "Seeing 2000" program funded through Cooperative Agreement No.: FAO-0158-A-00-5015-00. This funding is supported by a Congressional earmark and administered by the Bureau for Humanitarian Response, Office of Private and Voluntary Cooperation, Matching Grants (BHR/PVC/MG). Including a no-cost extension, "Seeing 2000" began in August 1995 and concludes February 2002.

"Seeing 2000" is a mechanism to strengthen capacity of eye care services for children in developing countries. IEF recognized that non-vitamin A related childhood blindness was not common, harder to find except in countries where there were more congenital defects due to consanguinity, and surgical outcomes were often poor. The competitive grant mechanism is a creative mechanism for IEF's partners strengthen their capacities to care for children with ocular disease. Proposals address three main areas of stated need:

1. Training of pediatric ophthalmologists and eye care providers.
2. Procurement of specialized ophthalmic and anesthesia equipment.
3. Outreach to identify children with vision problems and eye disease.

Initial proposals were received in April 1996 and the first nine grants were disbursed in August 1996. To date, a total 32 projects have been funded (24 institutions in 15 countries on 5 continents). Over the life of the project, IEF has learned that addressing *Retinopathy of Prematurity* (ROP) and low vision can have the greatest impact on saving and improving sight in children. During this reporting period (**October 2000 - December 2001**) nine projects were active:

Asia:

1. All India Institute of Medical Sciences (AIIMS), New Delhi, India
2. Resources for the Blind, Manila, Philippines
3. Lighthouse International with L. V. Prasad Eye Institute, Hyderabad, India
4. Tilganga Eye Centre, Kathmandu, Nepal

Central/ South America:

5. Vincent Pescatore Eye Clinic, Peten, Guatemala
6. Instituto de Educacion y Prevencion en Salud Visual, Lima, Peru

Eastern Europe:

7. Health for Humanity at University Eye Clinic, Tirana, Albania
8. Bulgarian Eye Foundation, Sofia, Bulgaria

Africa:

9. Orbis International, Addis Ababa, Ethiopia

Focus: These projects nine projects focused on training of trainers and child screening emphasizing:

- Retinopathy of Prematurity (ROP)
- Low vision care
- National and regional capacity building

Clinical Results:

- 101,084 children screened for vision problems and eye disease
- 14 ophthalmologists and low vision specialists trained in sub-specialty (pediatric) care with the expectation that they will develop national and regional sub-specialty training programs
- 350 surgeries were performed

Training Results

Three institutions used their “Seeing 2000” grants to train sub-specialists who have developed ongoing training programs during this reporting period:

- L.V. Prasad (India) has established a tuition-based low vision fellowship program
- Safdarjang Hospital (India,) a protégé of the AIIMS/Delhi, was awarded a grant from the World Health Organization to start an ROP training program
- Albanian ophthalmologists trained in IEF partner programs in India now train colleagues back in Albania.

Advocacy and Partnerships

“Seeing 2000” grants supported advocacy and coalition building for low vision services for children.

- Asia Pacific Regional Low Vision Meeting in Hong Kong in May 2001 focusing on recent developments and policy. Seven “Seeing 2000” projects and the “Seeing 2000” Program Coordinator participated.
- Organizational management capacity was strengthened through team training for staff in Albania and Bulgaria.
- The AIIMS project director and a US pediatric ophthalmologist prepared a clinical textbook, “A Practical Approach to Retinopathy of Prematurity: Screening and Management,” directed to developing countries.

“Seeing 2000” grants have been awarded to large and small institutions on all continents. IEF has learned that success is achieved by pediatric services that:

- function within larger institutions that have other ophthalmic sub-specialists and anesthesia services available,
- can financially support the less profitable pediatric service, and
- are situated in countries where congenital and hereditary conditions are more prevalent.

II. Background to Grant and Project Context

Childhood blindness is a serious health and economic problem in underdeveloped and developing nations. Many causes of childhood blindness are treatable with appropriate medical and surgical care. Additionally, proper refraction (eyeglasses) and low vision devices may allow children classified as blind to live active functional lives. The World Health Organization (WHO) estimates:

- 1.5 million blind children worldwide: 1 million in Asia; 300,000 in Africa
- Prevalence is 0.5 - 1 per 1,000 children aged 0 - 15 years.
- 500,000 children go blind each year (one per minute). Approximately 60% of these die in childhood.
- Childhood blindness causes 75 million blind years (number blind x length of life), second only to cataract.

The causes of childhood blindness vary from place to place and change over time.

- Africa: Corneal ulcer/scar (measles, vitamin A deficiency, harmful traditional practices)
- Asia: Vitamin A deficiency, Congenital cataract/rubella, Hereditary retinal diseases
- South America: Retinopathy of Prematurity

IEF was founded in 1961, at the same time many developing countries received independence. IEF's development programming addresses the evolutionary process of eye care services in the developing world. This evolution has mirrored the West's evolution in ophthalmology, only about 40 years behind. In the 1960's, developing countries needed qualified "general" ophthalmologists when the US was establishing training programs for "sub-specialist" ophthalmologists. The first pediatric ophthalmology fellowships were established at the Washington Hospital Center in D.C. in the 1960's. Today, many secondary and tertiary eye care institutions in developing countries have the capacity to support a sub-specialty pediatric ophthalmology service.

In 1996, IEF developed "Seeing 2000" (so that children in developing countries could see into the new millennium and beyond) to strengthen the capacity of NGOs and eye care institutions to increase and improve ocular surgery and treatment of blind and visually impaired children. "Seeing 2000" is supported by Congressionally earmarked funds mandated for this purpose. A short-term grants mechanism of \$60,000 or less, with the majority being \$25,000, reaches out to both known and new partners.

The initial plan was to open the proposal process to as wide a range of NGOs and institutions in all geographic areas. To date, "Seeing 2000" grants have been awarded to **32 projects have been funded in 15 countries on five continents.**

III. Project Methodology

IEF recognized three basic areas of need in establishing quality ophthalmic services for children:

1. Lack of pediatric ophthalmologists and low vision specialists with the skills to treat and operate on children.
2. Lack of specialized ophthalmic and anesthesia equipment to examine and operate safely and effectively on children.
3. Poor outreach to identify children with vision problems and eye disease early enough to restore sight.

Our effort extend grant opportunities to as wide a range of eye care services as possible, a Proposal Guideline Application is mailed to the WHO's "NGDO Partnership Committee for Prevention of Blindness" Member Agencies and Observers. IEF requests that these organizations forward the Proposal Guidelines to their regional and national partner organizations. Proposals are reviewed for merit and accountability. Preference is given to proposals demonstrating existing infrastructure; work in collaboration with a known PVO/NGO; and/or demonstrates cost-sharing and complementary funding. "Seeing 2000" projects must address the following objectives:

1. Increase by 20% or more the number of children receiving needed surgery for correctable ocular conditions in the areas served.
2. Increase by 50% or more the number of children under age six years receiving eye examinations in the areas served by a project. This may include conducting a survey of facilities housing blind and visually impaired children using the WHO protocol and methodology.
3. Identify at least one ophthalmologist or clinical officer within each project area and enhance their capacity to treat children clinically and surgically through additional training.
4. Establish systems of monitoring and surveillance including measurement of the quality of visual outcome.

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5. Increase by 10% or more the number of visually impaired children enrolled in blind schools who can be visually rehabilitated (spectacles, low vision aids, etc.) and integrated into a regular environment/school.
 6. Support existing efforts to increase awareness of ocular disease in children, its management and referral, in the medical communities of the regions being served through primary eye care workshops.
 7. Support existing efforts to increase awareness of ocular disease in children among parents and the general public through education/promotion activities and local media.

IEF recognizes that these objectives may be self-limiting and are more output driven than results driven. Objective number four was added in year four as IEF acknowledged that many grant recipients were not actively collecting data and tracking progress.

Early on, the solicitation process was aimed at attracting and stimulating proposals to support general pediatric ophthalmic services. More recently, "Seeing 2000" has targeted institutions developing "models" and "best practices". Training of pediatric ophthalmologists and developing/strengthening a core network of pediatric ophthalmologists has always been a program priority. New and additional areas of emphasis include, ROP, low vision services, school screening, and strengthening management/financial infrastructure.

During this reporting period, several grants for amounts larger than the typical \$25,000 been awarded to US PVOs working in partnership with local NGOs and hospitals. These larger grants have helped build alliances with US PVOs, reduced IEF's administrative and management burden, and focused on financial sustainability.

IV. Monitoring and Evaluation

Initially, projects reported to the IEF quarterly in English using a standardized format. This includes tables based on the project objectives stated above, and a narrative description of problems, achievements, unexpected benefits and plans for the following quarter. This format, with minimal emphasis on narrative, was chosen to facilitate reporting for non-English speakers. However, as "Seeing 2000" has developed long-term relationships beyond the 12-month project cycle anticipated in 1996, reporting has evolved to be more collaborative and to reflect the individual character and emphasis of each project. Project responses stated that "Seeing 2000" reporting was

cumbersome and an additional burden, a common problem in clinics and hospitals. Efforts have been made to reduce reporting requirements to simple data and achievements.

Baseline data

Baseline data for the current portfolio of "Seeing 2000" projects is not available prior to their "Seeing 2000" grant because data was not collected separately for children or low vision patients. The larger centers such as LV Prasad in Hyderabad, India reported quarterly on numbers of outpatients seen and surgeries performed, how many were paying and how many were free, but did not break out how many were children because children and adults were treated by the same ophthalmologists. Now that pediatric eye clinics with ophthalmologists and health workers dedicated to treating children have been established, and with input from "Seeing 2000" and other western PVO/NGDO partners, data collection has improved. Additionally, there has been a subtle shift in emphasis by the projects from increasing surgeries and eye examinations to increasing organizational and technical capacity for sub-specialty service delivery.

For purposes of standardization and reporting, data for the seven stated program objectives (see above) were collected. Methods to document and measure increases in organizational and technical capacity are still on-going and a focus of the IEF's Matching Grant: "Seeing 2000" Revised and Expanded.

Cost benefit analysis

All "Seeing 2000" grant recipients receive funding from other donors including Ministries of Health, local charities, and international NGOs/PVOs. It is difficult to identify children receiving eye care that was financed only through "Seeing 2000".

However, the role of "Seeing 2000" should not be minimized because the grant mechanism has been a catalyst and incentive for many organizations, small and large, to initiate, improve, and expand the delivery of pediatric eye care. Specifically, providing training to ophthalmologists in Peru, India and Albania who can now operate on congenital cataract, ROP with laser, and strabismus (squint) has made it possible restore children's sight that would otherwise be blind unless they could travel to a center providing such services. Providing pediatric anesthesia equipment to hospitals in India and Nepal has allowed hundreds of children to be examined under anesthesia and many to have operations that could not have been adequately treated without it. Expanding outreach for hospitals in India and Nepal have identified hundreds of children

who would otherwise not have been treated in a timely way in order to restore their sight at an early age when the eye and brain are still “learning to see.”

Monitoring Plan

Monitoring and evaluation of the projects is conducted on an individual level through correspondence, reporting and site visits. This will continue through the remainder of the Cooperative Agreement, February 2002.

Evaluation Plan

The USAID final evaluation of this program was conducted October – December 2000. A final evaluation report by Dr. Roy Jacobstein, USAID’s external evaluator, was submitted to BHR/PVC in January 2001.

IEF will submit a final program report and evaluation at the close of this Cooperative Agreement, ending February 2002. We summarize and analyze individual project information within the context of the overall program. Per Dr. Jacobstein’s recommendation, we anticipate developing a final report template for the individual projects to complete. It is anticipated that selected projects will receive site visits.

Monitoring and evaluation information will be used to identify appropriate candidates for continued funding under “Seeing 2000: Revised and Expanded.”

V. Review and Analysis of Project Results by Partner Institution

See Annex A for individual reports of each country receiving a “Seeing 2000” grant in 2001, listed in alphabetical order by name of grant recipient organization.

VI. Management: Review and Analysis of Headquarters/Support Functions

HQ to Field Site Visits:

Between October 2000 – September 2001, IEF’s “Seeing 2000” Coordinator made site visits to eight current and three completed projects. Three staff members from two “Seeing 2000” projects visited IEF Headquarters. A list of projects visited and dates are listed in the Annexes.

Monitoring and Evaluation:

In response to recommendations made during the evaluation of "Seeing 2000" completed in December 2000, IEF has sought to strengthen its internal monitoring and evaluation capacity:

- 15-16 March 2001: "Appreciative Inquiry" conducted by Mary Liakos for all IEF headquarters staff.
- 21 March 2001: "DOSA" conducted by Sabrina Atwater of PACT for all IEF headquarters staff.
- 4-15 June 2001: "Quality Assurance Management Methods in Developing Countries" course at Johns Hopkins University, Baltimore attended by Ms. Yordanka Koleva and Dr. Vladimir Chaushev of the Bulgarian Eye Foundation/Sofia.
- 18-20 June 2001: "LogFrame" workshop conducted by Team Technologies for IEF headquarters program staff and Ms. Yordanka Koleva of the Bulgarian Eye Foundation/Sofia.

Building Communications and Networking:

IEF has promoted direct networking between "Seeing 2000" grant recipients through email and conferences. Specifically, the ophthalmologists at AIIMS/India and in Peru are sharing information related to Retinopathy of Prematurity and serving as referrals for other projects needing information on ROP.

- 28-30 May 2001 - Asia Pacific Regional Low Vision Workshop:

This workshop held in Hong Kong was co-sponsored by the WHO, IEF and other organizations. It brought together leading experts in the field of low vision from the WHO, academia, NGOs, and a number of "Seeing 2000" grant recipients. Not only did grantees meet one another and develop national plans for action, they were also introduced to manufacturers of low cost vision aids and training opportunities available at other centers in the world.

- 12 November 2001 - American Academy of Ophthalmology (AAO):_

During the annual AAO meeting held 11-15 November in New Orleans, IEF organized a round table discussion on the subject of anesthesia use in children. This issue is discussed further in the report from Tilganga Eye Centre, Kathmandu, Nepal. Participants:

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- Dr. Sanduk Ruit and Dr. Suran Rana - Tilganga Eye Centre, Nepal
 - Dr. Amar Deuja - Lumbini Rana Ambika Eye Hospital - Nepal
 - Dr. Sashank Korala, Dr. Suzanne Gilbert - SEVA-US
 - Ms. Linda Jay Jackson - Helping Hands, Nepal
 - Dr. Pasumala Lakshminarayana, All India Institute of Medical Sciences, India
 - Dr. T. Otis Paul, pediatric ophthalmologist, US & USAID "Seeing 2000" evaluator
 - Dr. Judith Newman - ophthalmologist, US
 - Dr. Dan Kaar (pediatric ophthalmologist)
 - Ms. Lori Carruthers - IEF, US

IEF is reviewing this program to determine where funding provides the greatest impact and how to refine the grant criteria. IEF's programming now focuses strongly on management and financial sustainability. It is clear that pediatric ophthalmology services are not sustainable in a vacuum, larger centers have a greater capacity to identify and treat more children, private or NGO institutions have greater flexibility to introduce and implement cost recovery mechanisms, and partnerships with US PVOs bring additional financial resources to the table.

VII. Lessons Learned and Long Term Project Implications

Specialty eye care in developing countries, whether it is retina/vitreous, glaucoma, or pediatric ophthalmology, is only offered in sophisticated centers in urban areas. This limits the number of institutions with which organizations like the IEF can work due to the present language of the Congressional earmark from which "Seeing 2000" was funded. These sophisticated centers and the many smaller eye clinics with only one or two ophthalmologists must put children's eye care services within the context of other blinding priorities such as cataract in adults, glaucoma, and trachoma. Their ability to gear up to treat more children is severely limited without infrastructure development, financial resource development, and capacity building for management efficiency and team approaches to care. That is why the approach of "Seeing 2000: Revised and Expanded" emphasizes administrative and financial management.

Another important component to increasing the number of children receiving services for eye care diseases is to increase the number of ophthalmologists and other vision specialists capable of treating children with eye disease or vision loss. That is why nearly all of the current "Seeing 2000" projects emphasize training ophthalmologists and low vision specialists. In all training oriented projects, those trained have been tasked with the local training of others. In this

way, the number of children being treated for avoidable and preventable blindness can continue to grow in a rapid and sustainable manner. However, it takes time for the first generation of ophthalmologists to be trained and even longer for these trainees to train the next generation of ophthalmologists and for an increase in the volume of pediatric surgery to be noted. This is another reason why the IEF is focusing on supporting fewer grantees over a longer period of time. The projects in Albania and in Ethiopia are fine examples of ophthalmologists being trained in pediatric skills over 12 months. Now that they have returned to their home countries, they will need continued support in order to begin training ophthalmologists locally and generating awareness of the services available.

Estimate of project costs and benefits

The building of pediatric subspecialty services involves a multi-tiered approach. These include:

- Training
- Awareness building, both formally and informally, and to the general public and the medical community
- Prevention activities
- Advocacy
- Fund-raising and seeking gifts-in-kind or other donations
- Surgery
- Eye examinations and school screening

The IEF is cognizant that “Seeing 2000” grants provide a stimulus to the development of pediatric eye care services but that our funding is not solely responsible for increase in pediatric service delivery. Apportioning “Seeing 2000” grants between the number of eye examinations and eye surgeries performed to determine the cost for an eye examination and eye surgery does not accurately reflect costs. This method does not include the additional interventions used by the projects nor the other contributions toward salaries, office space, transportation, operating theater costs and so forth given by the eye care institution, national government or other international organization participating in a “Seeing 2000” project.

Additionally, a cost/benefit analysis using figures of grant funds disbursed against services provided does not include improved quality of life measurement. A study examining the quantifiable value of a sighted child over a blind child is not feasible for “Seeing 2000” at this time. However, one project director eloquently stated:

"To us each child's sight is costless. Had it been my child I would give all the money I possess to save his sight. So if the originator of this question can tell me the cost of the sight of his/her child. I would then be able to tell them the cost benefit ratio."

Institution building assessment

Receiving a "Seeing 2000" grant is a competitive process and because of this, obtaining a "Seeing 2000" is viewed as a motivating and esteem building event by the recipients and allows the institution to initiate and strengthen their service delivery to children. "Seeing 2000" activities enabled the Center for Sight Enhancement at LVPEI to initiate a fellowship in Low Vision Services and the organization moved beyond service delivery to include training of low vision specialists. RBI's "Seeing 2000" grant enabled them to provide services and devices to children with low vision needs when previous to their grant their services were directed to the totally blind.

Additionally, grant recipients have benefited from organizational and capacity building interventions by projects as part of their "Seeing 2000" projects. Training of management staff and the strengthening of management techniques have been essential components of the projects in Albania and Bulgaria. For projects with smaller budgets and fewer external resources, their "Seeing 2000" grant enabled them to continue providing and systematizing activities until the larger organization can absorb these necessary interventions.

Estimate of sustainability

The definition of sustainability is not always clear. In the past, sufficient numbers of trained personnel defined sustainability and a more current definition of sustainability implies financial self-sustainability. Pediatric eye care services are expensive and costs can include labor intensive outreach, expensive general anesthesia for surgery, specialized training, extensive follow up visits and suitably sized equipment. Recovering costs from patient fees is not as feasible for pediatric service providers as for those providing high volume, low cost surgery for adult cataract patients.

"Seeing 2000" projects, however, are looking at ways to generate revenue that will cross subsidize their service delivery. Instituto de Educacion y Prevencion en Salud Visual is examining the possibility of marketing their health education materials to cross-subsidize their service delivery. Income from sales of AIIMS book, *A Practical Approach to Retinopathy of Prematurity* is hoped to generate money that will provide a salary for office support staff, necessary to organize and track patient data and follow up visits. Not all projects have "products" like books or health education materials that can easily be marketed, but what they do have is a skill sets and models that sustain service delivery and are the basis

for developing the skills within others to provide eye care services for children. Training additional providers of pediatric eye care services is ultimate sustainable result of the "Seeing 2000" program.

Innovation and technology transfer

As all projects are, or will be, involved in developing the capacity of others to provide pediatric eye care services, all projects are, or will be, transferring technical, clinical knowledge to others. Other key innovations produced by "Seeing 2000" projects are:

- A locally produced low vision device (telescope) at LVPEI. Their aim is to develop and manufacture high quality and low cost, low vision devices. Traditionally, low vision devices are expensive and not affordable by those who need them in the developing world.
- A book, *A Practical Approach to Retinopathy of Prematurity: Screening and Management*, written by Dr. Kumar at AIIMS and co-authored by American pediatric ophthalmologist Dr. Michael Shapiro.
- The project at AIIMS designed an innovative new "pull-along trolley" to carry the cylinder of Nitrous Oxide and the Cryo machine in one stand. This kind of a combination was not available previously and was designed by project staff and produced by Appasamy.
- Comic books and flip charts developed by the Instituto de Educacion y Prevencion en Salud Visual of Peru available for purchase.
- A protocol for examination and treatment of ROP for the national Social Security Hospitals in Peru.

Policy Implications

Most of the projects are working toward institutionalizing their "Seeing 2000" initiated activities within a larger institution.

- The ROP project at AIIMS, the national referral hospital for a country of one billion, has the potential to influence the inclusion of ROP screening and treatment at government run eye hospitals.
- The Instituto de Educacion y Prevencion en Salud Visual developed the examination and treatment protocol for babies at risk of ROP for the national system of social security hospitals.

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- Resources for the Blind's provincial school screening program is aimed at developing a model that can be used nationally in the Philippines to identify first graders with vision problems and eye disease.
 - The Leadership Training in Albania has the potential to influence a new generation in leadership style and skills.
 - The Bulgarian Eye Foundation's private sector clinic that will serve both paying and non-paying patients may be a model used by other eye care providers.

Collaboration/networking with other US agencies

The "Seeing 2000" project is collaborating with the following American organizations:

- Health for Humanity, Illinois
- Lighthouse International, New York
- ORBIS-International, New York
- Volunteer Optometric Services to Humanity, Pennsylvania
- World Eye Mission, Michigan

The description of these collaborative activities are explained below.

Partnering with local entities

All of the "Seeing 2000" projects are partnered with local entities. The project at the All India Institute of Medical Sciences is at the national tertiary hospital of India. The projects in with the Instituto de Educacion y Prevencion en Salud Visual in Peru, Tilganga Eye Centre and the Bulgarian Eye Foundation are partnered with local non-governmental organization. Resources for the Blind is a local non-governmental organization that also is recognized in the United States. The projects in Albania, Ethiopia, Guatemala and Hyderabad, India are a joint partnership between IEF, an American PVO and a local eye care provider. The development of national capacity has always been a priority and a focus of "Seeing 2000".

Developing partnerships between organizations

The following grants were given jointly to four organizations:

- Lighthouse International, USA and L. V. Prasad Eye Institute, INDIA
- Volunteer Optometric Services to Humanity/Pennsylvania USA and the Vincent Pescatore Eye Clinic, GUATEMALA

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- ORBIS-International/USA and ORBIS-International/ETHIOPIA
 - Health for Humanity/USA and University Eye Clinic/ALBANIA

These grants strengthened the relationship and continuity between these organizations and their partners and enhanced the relationship between IEF and the American partner opening the door to future and continued collaboration. One example is the purchase by VOSH/International of clinical equipment from the IEF's SightReach Surgical Program. Additionally, IEF's SightReach Management is planning to establish a separate relationship with the Guatemala participants on a new project.

The IEF also established a linkage between the American non-governmental organization World Eye Mission (WEM) based in Michigan, the Bulgarian Eye Foundation, and the Vincent Pescatore Eye Clinic staff. The World Eye Mission's goal is to provide hands-on surgical training to ophthalmologists in developing countries. As a result of this new linkage between the IEF and WEM, the World Eye Mission has recommended an optometrist that may play a vital mentoring role for the low vision project at Resources for the Blind in the Philippines.

Replication Potential of project approach and activities

- All India Institute of Medical Sciences, Delhi, India: This project is already being replicated at Safdarjang Hospital (SH), the first hospital where AIIMS project staff began training outside of their own hospital. The World Health Organization has given a grant to SH to continue their own ROP activities and support their training of staff at additional hospitals.
- Instituto de Educacion y Prevencion en Salud Visual, Lima, Peru: The Project Director has trained ophthalmologists at other hospitals to identify and treat children at risk of developing ROP. An ophthalmologist in rural Arequipa now screens babies at risk for ROP and is providing surgical treatment under the guidance of his mentor.
- Bulgarian Eye Foundation, Sofia, Bulgaria: The transition from a socialist way of working to an entrepreneurial style is being refined throughout the former socialist world. Our model is eye care specific.
- Lighthouse International/L V Prasad Eye Institute: The partnership and working relationship established between LI and LVPEI is based upon existing relationships LI has with providers of low vision services in other regions in creating "Centers of Excellence". LI is planning on developing another "Center of Excellence" within India and will likely use 'lessons learned' as they replicate another Center. Additionally, the LI model is

based upon a Training of Trainers methodology and the LVPEI project staff are already making the transition from trainees to trainers.

- ORBIS International – Ethiopia: It is hoped that this project’s expectation that the ophthalmologist trained in pediatric techniques will return home to train other ophthalmologists is an expectation that will be replicated more and more by other projects and in other countries. Training of one ophthalmologist to provide services is no longer enough, merely enhancing an individual’s capacity. Training of an ophthalmologist and giving them the skills and expectation to train others, enables national capacity development.
- Resources for the Blind, Manila, Philippines: One aspect of this multi-component project is to create a replicable model for school screening of vision that can be used nationally.
- Health for Humanity/University Eye Clinic: A key component of this project is the training of ophthalmologists in sub-specialty techniques in order that they train Albanian ophthalmologists in sub-specialty techniques. It is fully anticipated that there will be successful replication of ophthalmic sub-specialists in Albania. Additionally, the UEC is replicating the guidance and technical assistance it has received from HH and others within the region to Kosovo and Macedonia.
- Volunteer Optometric Service to Humanity/Vincent Pescatore Eye Clinic: The services that this project aims to deliver in a rural underserved area of Guatemala is in one sense replicating the services available in urban Guatemala City.

VIII. Annexes

Annex A Project Results by Partner Institution

Annex B Project history to date

Annex C Project spreadsheet

- Project Summary Data
- Sub-grant Chronology
- Expenditures

Annex D Partner Profiles

- BEF
- Tilganga
- L. V. Prasad Eye Institute
- Instituto de Educacion y Prevencion en Salud Visual

Annex E Story from L. V. Prasad Eye Institute

Annex F List of visits of IEF and "Seeing 2000" project staff

Annex G Trip Reports

- India
- Hong Kong

Annex H Brochure from Low Vision Course at L. V. Prasad Eye Institute

Annex I Photocopies Other

- ROP Book Cover
- ROP Comic Book #1 of 4

Annex A

Review and Analysis of Project Results by Partner Institution

Individual reports of each country receiving a “Seeing 2000” grant in 2001, listed in alphabetical order by name of grant recipient organization.

1. All India Institute of Medical Sciences, India

Rationale for funding:

Retinopathy of Prematurity (ROP) is a condition affecting the eyes of premature and underweight (under 5 pounds) newborns and can lead to complete and irreversible blindness. It is rapidly becoming the leading cause of childhood blindness in mid-level economically developing countries mainly in South America, Eastern Europe and India because these countries can now save smaller and smaller pre-term births who would have otherwise died.

ROP, already controlled in the West, is an eye disease that cannot be prevented in the conventional sense although good prenatal care to prevent premature birth is important. However, blindness from ROP can be avoided through timely identification and appropriate treatment with laser therapy. Establishing and institutionalizing ROP screening programs is crucial to restoring usable sight in newborns whose entire lives are ahead of them. The window of time to effectively treat and operate, i.e. with optimum visual outcomes, on children identified with blinding ROP is limited to the first few weeks of life.

This project is based at the All India Institute of Medical Sciences (AIIMS) in New Delhi and is the national eye care referral center for India’s population of 10 million. It therefore has the potential to influence national policy and protocols on the care and treatment of babies at risk for blindness from ROP. Originally approved for funding in 1997, implementation was delayed until September 1999 as Dr. Harsh Kumar, the project director, accepted a two-year overseas assignment in Kuwait.

“Seeing 2000” funding supported:

- Preparation and publication of a clinical textbook on ROP
- Collection and analysis of data
- Institutionalization of ROP screening and treatment at AIIMS and other sites

- Establishment of protocols, standard setting and training of pediatric ophthalmologists within the national hospital system

Accomplishments:

Objective 1: Increase in surgery

Objective 2: Increase in eye examinations

Reporting Period: 11 months	Sep-Dec 1999 (4)	Jan-Mar 2000 (3)	Apr-Jul 2000 (4)		Total
Children Screened at AIIMS	32	25	21		78
Children Screened at SH		16	31		47
Children Screened at LHMC:					
Other centers	1	1	9		11
Total Children Screened:	33	42	61		136
Total Referred for Exams	113	150	195		547
Total ROP Surgeries:	3	4	2		9

Reporting Period : 13 months	Aug-Dec 2000 (5)	Jan-Mar 2001 (3)	Apr-Jun 2001 (3)	Jul-Aug 2001 (2)	Total
Children Screened at AIIMS	27	14	21	20	82
Children Screened at SH	78	52	55	40	225
Children Screened at LHMC:	14	20	26	10	70
Other centers	12	4	7	1	24
Total Children Screened:	131	90	109	111	441
Total Referred for Exams	363	217	220	248	959
Total ROP Surgeries:	10	13	4	2	29

Note: Of the 577 children screened since September 1999, 317 were boys and 260 were girls.

Objective 3: Training

Dr. Harsh Kumar has written a clinical textbook titled “*A Practical Approach to Retinopathy of Prematurity: Screening and Management*” co-authored by Michael J. Shapiro, MD of the University of Illinois-Chicago. In its final edit stage, it is directed at pediatric eye care providers in the developing world, something that does not currently exist. IEF is assisting with distribution through the WHO, American Academy of Ophthalmology, International Agency for Prevention of Blindness, and Vision 2020 partners. It is planned for Dr. Shapiro to give a practical workshop on ROP techniques in early 2002 in Delhi.

Five ophthalmologists received hands-on training and support from Dr. Kumar:

- Dr. P. Laxminarayana, All India Institute of Medical Sciences, Delhi
- Dr. BP Guliani, Safdarjang Hospital, Delhi
- Dr. N. P. Manjunatha, Delhi

-
- Dr. Sarita Beri, Lady Hardinge Hospital, Delhi
 - Dr. Seema, Delhi

The AIIMS project expanded to Safdarjang Hospital (SH) in February 2000, a government hospital with approximately 15,000 births annually and whose clients are primarily individuals and families with few financial resources. In September 2000, the Lady Hardinge Medical College (LHMC) with annual births of 15,000 and serving primarily women and children was added. Dr. Kumar trains, oversees, and provides ongoing clinical support as well as data collection at both hospitals. Outreach and public awareness activities are planned when systems and skilled clinicians are in place to ensure quality care and surgical outcomes.

Additionally, the training received under "Seeing 2000" has been a "seed" that has resulted in Safdarjang Hospital being awarded a grant from the WHO to develop its own program to train pediatric ophthalmologists from smaller hospitals to identify and treat ROP. This confirms the success of the project and its training approach, *"in effect creating a trained manpower pool, which will be teachers themselves to have ripple effects"* (a quote from a report from the Project Director).

Objective 4: Establish Monitoring Systems

Prior to "Seeing 2000," there were limited systems in place to monitor children at risk of ROP. As a result of "Seeing 2000," the ROP screening program is now institutionalized to identify, examine and treat premature babies at three hospitals: Dr. R. P. Centre at AIIMS, SH, and LHMC, and permanent staff have been allocated. As a direct result of "Seeing 2000," the permanent policy at SH and LHMC in addition to the Dr. R. P. Center at AIIMS now includes eye exams for all children born prematurely.

Objective 6: Raising awareness in professional communities

Similar to the "Seeing 2000" ROP project in Peru, a network of neonatologists, pediatricians, nurses, anesthesiologists and ophthalmologists has been developed to identify and refer at risk newborns in a timely manner. There have been several WHO sponsored regional workshops on ROP, and several collaborative workshops with Pediatric Departments at AIIMS, SH and LHMC have been part of Dr. Kumar's ROP orientation to ophthalmologists, pediatricians, students, support personnel and nursing staff. Additionally, the project has collaborated with several small local NGO's and hospitals, now using "Seeing 2000" sponsored pamphlets and materials to initiate their own screening programs.

Objective 7: Raising awareness in the general public

Clinical protocols, health education materials for parents in Hindi, and a poster for health facilities listing the risk factors for ROP were developed and distributed. The Public Awareness Campaign has been kept on small scale until a cadre of well trained pediatric ophthalmologists are in place to properly care for an increased number of babies at risk of developing ROP.

Note: When asking about the use of health education materials during a site visit, one mother who had brought her child for a follow up eye exam demonstrated her brochure along with her child's health card. A doctor at Safdarjang Hospital stated that parents of premature babies are sharing information about ROP, the need for early eye screening and regular follow-up, and are referring other parents to Safdarjang Hospital.

Discussion

Obstacles and Challenges:

This project has carefully managed its resources extending its \$25,000 grant over a planned 27-month period. Obstacles faced related to being housed at the national tertiary hospital (competing priorities,) and the complexity involved in procuring equipment and supplies within a bureaucratic structure. Quoting from a Project Director's report:

"One must keep a significant lag period in getting clearance, equipment reports and other such technicalities. Since all this taken time of up to 6 months to 1 year in Government Institutions. Though it might seem as inordinate delay yet this is necessary since the procedure helps to check any loopholes, provides the exact government inputs which at time are beneficial and were overlooked by us."

Unintended Benefits:

- The project designed a new "pull-along-trolley" that helps to keep the cylinder of Nitrous Oxide and the Cryo machine in one stand. This kind of a combination carrier was not available previously and was designed by project staff and produced by Appasamy, a local Indian company.
- All nurseries where this project functions report the following unintended but extremely useful benefits: tighter control of blood gasses; better survival and much greater care in administering oxygen; and overall decrease in incidence of ROP.

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- Compliance with follow-up visits for premature babies has increased because parents are now aware and extremely concerned over the risk of irreversible blindness. Both eye and physical check ups are done together being seen by the pediatrician and the ophthalmologist at the same time.

Future Plans:

- Dr. Harsh Kumar is seeking funding to establish a model two-bed nursery for the standard of care and treatment of ROP babies.
- Dr. Michael J. Shapiro, co-author of "*A Practical Approach to Retinopathy of Prematurity: Screening and Management*" will give a practical workshop on ROP techniques in early 2002 in Delhi.
- Dr. Kumar plans to expand the ROP protocols and training beyond New Delhi to the region and eventually nationally in order to avert and control a rise in ROP rates in the future.

2. Bulgarian Eye Foundation "Sight for All," Bulgaria

Rationale for funding:

This \$30,000 grant represents a transition for "Seeing 2000" from a program that emphasizes strict service delivery to improving organizational capacity, including management skills.

The Bulgarian Eye Foundation "Sight for All" (BEF) and the IEF celebrated their ten-year partnership in July 2001, one of the first US-Eastern European PVO/NGO partnerships established after the fall of communism. During the decade, there has been a significant shift socialist models of health care delivery to active implementation of private sector and public/private initiatives. The basis of this "Seeing 2000" grant is to enhance the BEF's capacity for financial self-sufficiency and independent management through improved organizational and management capacity.

The IEF has a strong partnership with the Lions Aravind Institute of Community Ophthalmology (LAICO) in Madurai, India as a south-south management and clinical training resource. The BEF participated in LAICO's "Management of Eye Hospitals" course and the "Vision Building Workshop," both focusing on quality of care, service delivery, increasing patient volume, cost accounting, procurements, management and M&E. The BEF sent a team that included administrative and clinical staff from the St. Anna Hospital in Sofia where the BEF is based.

Accomplishments:

Objective 3 : Training

1. Management of Eye Hospitals: Ms. Yordanka Koleva, Executive Director of the BEF, participated in this one-month course at LAICO in India in November 2000. As a result, Ms. Koleva prepared comprehensive work plans, budgets, and analyses for the transition of the BEF's eye clinic to semi-autonomous management with income generation.
2. Vision Building Workshop: A four-person BEF team participated at LAICO in India in December 2000:
 - Prof. Petja I. Vassileva, MD, PhD, DSc, MPH, Founder and Chair of the Board of Directors
 - Dr. Dimitar Petrov - Assistant Professor at St. Anna Eye Hospital, Department of Ophthalmology
 - Mr. Simeon Popov - member of BEF's Board of Directors and General Manager of Multilekon, Ltd., a contact lens manufacturing company
 - Ms. Yordanka Koleva, Executive Director of BEF and Manager of the Sofia Eye Bank

This workshop was designed to support teams of professionals through the different stages of a hospital creating process. The six-day workshop included lectures, discussions, visits to the departments of the Aravind Eye Hospital, a visit to an eye camp, and the satellite Aravind Hospital at Theni. A Plan of Action for the BEF was developed as a part of this Workshop. Workshop topics:

- "Vision 2020: The Right to Sight" global campaign
- Call for Comprehensive Eye Care Programs
- Planning, Management and Evaluation of Eye Care Services
- Project Management
- Leadership and Vision
- Social Marketing for Effective Eye Care Delivery
- Medical Records
- Human Resource Management
- Facilities Planning
- Administrative and Supportive Services Management

During the break between the first and second courses, Ms. Koleva had the opportunity to visit the L. V. Prasad Eye Institute in Hyderabad, India and the Tilganga Eye Centre in Kathmandu, Nepal. Both of these eye care facilities (and "Seeing 2000" grant recipients) also provide high quality surgery while recovering costs. Their "models" allowed for Ms. Koleva to compare and contrast their methods of success in order to further identify necessary qualities as the BEF works to develop their own model of providing high volume, low cost, quality eye care service to all.

Discussion:

The government health system does not offer incentives to increase patient volume, lower costs, or improve the quality of service. In fact, the BEF has been scolded for increasing the number of patients as it drains the St. Anna Hospital budget and resources. The transition from a socialist system of service delivery to an entrepreneurial, self-directed, and self-supported system is a tremendous challenge involving risks that people in a communist society are not used to taking.

For several years, IEF has encouraged the BEF, which it helped establish as a local NGO, to move out of the government run St. Anna Hospital and set up a private Eye Clinic. Such a clinic could serve all economic strata, but would allow for independent management and control of assets. The BEF's was always affirmative, yet they had been hesitant to move until an appropriate facility was identified.

In addition to the excellent team training received at LAICO/India, several other factors contributed to the BEF's decision to move. A national health insurance system is now in place in Bulgaria. Though it does not yet fund out-patient surgery (cataract surgery is typically done on an out-patient basis,) it is to be added in the near future once the system builds equity. Additionally, the private sector is becoming stronger and many companies offer their employees private health insurance.

In September 2001, the BEF established a private eye clinic at the Diagnostic Consulting Center#18 which belongs to Municipality of Sofia. It is a private, multi-specialty center that includes general and specialty clinics, a pharmacy, and lab services. The BEF will control its own medical and surgical suites, its assets, income, and management, giving it a level of independence not experienced in the past. Fees can be charged on a sliding scale according to the patient's ability and willingness to pay.

3. Health for Humanity, Albania

Rationale for project:

The IEF and Health for Humanity (HH,) an American PVO, have a decade-long relationship with the University Eye Clinic (UEC) in Tirana working to improve the eye care service in Albania. HH's proposal, funded at \$55,000, was developed in collaboration with the UEC's director, Dr. Sulejman Zhugli, Chief of Ophthalmology, and his staff. Like the new project in Bulgaria, this project focuses on building organizational and management capacity.

HH's efforts in Albania have centered on improving eye care for adults. Consequently, modern cataract surgery is now available at six centers. The residency training program and tertiary services at the UEC in Tirana have been upgraded. The focus has now shifted to subspecialty care and the improvement of pediatric eye services.

When the proposal was submitted, eye problems in children were addressed by an Albanian ophthalmologist who had limited skills in modern pediatric ophthalmic care and was about to retire. Ophthalmic sub-specialties, in particular retina and glaucoma, also needed strengthening in order to provide comprehensive services for Albanian children. To maximize efficiency and productivity, management capacity also needed attention.

This grant supports human resource development in the areas of pediatric, glaucoma and retina specialties by supporting south-south training for Albanian professionals at the LAICO/India program and LVPEI/India. Specialists returning from India are upgrading the skill of ophthalmologists outside the capital, and setting up screening programs to identify children needing care referral and treatment. The goal is to reduce the prevalence of blindness in Albanian children. Objectives are:

1. Improve outpatient and surgical capacity to address blinding pediatric eye diseases.
2. Develop management capacity to improve efficiency and productivity of eye services at the UEC.
3. Institutionalize the transfer of sub-specialty skills at the UEC through a fellowship program in pediatric ophthalmology.
4. Institute a pediatric ophthalmology component as part of the ophthalmology residency training program.
5. Institutionalize vision screening in schools under the direction of the UEC.

Achievements:

Objective 1: Surgery

Baseline surgical data for the three Albanian ophthalmologists trained by this project were not kept. The doctors have recently returned to Albania from India and surgical data is now collected.

Objective 2: Increase in eye examinations

Outpatient pediatric visits per doctor – January to September 2001	
Dr.Sulejman Zhugli	129
Dr.Gjergji Cepa	108
Dr.Agetina Dushi	526
Dr.Pajtim Lutaj	76
Dr.Mihal Bezhani	34
Dr.Vilma Mema	20
Dr.Veli Tagani	350
Dr.Shkelqim Dajti	9
Dr.Blerina Jorgaqi(resident)	5
Dr.Agron Kuro (resident)	18
Dr.Amarildo Belshi (resident)	7
Total	1,282

Objective 3: Training

The Albanian system of training ophthalmologists is a two-tiered system similar to other parts of Europe. Some ophthalmologists train as clinicians and others as surgeons. One can graduate as an ophthalmologist in Albania without ever having performed surgery. The project has supported three Albanian ophthalmologists for fellowship training at the Aravind Eye Hospital in Madurai, and the L. V. Prasad Eye Institute in Hyderabad, India utilizing IEF's strong partnership for south-south training with these two institutions.

Training Pediatric Ophthalmologists:

- Dr. Shkelqim Dajti, an ophthalmologist who completed his training at the University Eye Clinic in Tirana, spent 6 months at the Aravind Eye Hospital and 6 months at L. V. Prasad Eye Institute as a pediatric ophthalmology fellow. Now back home in Albania, Dr. Dajti is developing a dedicated pediatric ophthalmology service at the University Eye Clinic in Tirana.

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- Dr. Enno Qerimi also trained in ophthalmology at the University Eye Clinic in Tirana and began his one-year pediatric ophthalmology fellowship in July 2001 at the L. V. Prasad Eye Institute. He is scheduled to return to Albania in July 2002 and will be posted to the city of Durres, the second most populous city in Albania. He and Dr. Dajti will coordinate pediatric ophthalmology services for the country.

Training One Glaucoma Specialist:

- Dr. Arjeta Demi also received her ophthalmology training at the University Eye Clinic in Tirana. The project supported her 6-month training in glaucoma at the Aravind Eye Hospital. Dr. Demi awaits official assignment to the UEC in Tirana. Until then, she has been translating management manuals into Albanian, and trained 100 school teachers to measure vision and set up programs within their schools.

Management Training:

- Mr. Gentjan Jorgaqi, a graduate in Economics from the University of Tirana, he is currently taking a one-year training program in management at Aravind Eye Hospital. The program is custom designed for the needs in Albania as he is expected to take over management of the ophthalmology department when he returns to Tirana in March 2002.

Leadership training:

- Dr. Sulejman Zhugli, Chair, Department of Ophthalmology, UEC in Tirana, attended a workshop on "Leadership" December 10-14, 2000 in Orlando, Florida conducted by University Nur from Bolivia, one of HH's partners. Dr. Zhugli was so impressed by the Bolivian partner's training that he requested a similar course for his staff in Albania.

Subsequently, a two-day Leadership Seminar was held February 24 and 25, 2001 in Tirana for eight English-speaking representatives of the UEC and three additional interested individuals. Those participating were enthusiastic about offering this to a larger segment of UEC and Dr. Demi has translated the training manual into Albanian for this purpose. In February 2002, Mr. John Kepner from Bolivia's University Nur (and a former IEF employee) will conduct a three-day workshop in Tirana for approximately 15 people. It is hoped that a common vision will be created for the UEC and that a renewed spirit of collaboration and service will be instilled in the participants.

Objective 4: Establish systems of monitoring

- In addition to improving management capacity in individuals, this project is creating monitoring and evaluation systems that will permit the UEC to chart its progress. To this end, a system is in place to document productivity in the eye clinic. The following data are now being kept: numbers of outpatient visits (totals and per doctor); numbers and kinds of surgeries (totals and per doctor); numbers and sources of referrals (particularly of pediatric patients).

Discussion:

The most important and critical aspect of this program is the training of ophthalmologists to perform surgery, something that likely would not have happened without this grant. Additionally, three ophthalmologists have received sub-specialty training in pediatrics, retina and glaucoma. They are now responsible for training other ophthalmologists in Albania in these specialty areas. Dr. Dajti, only a few months out of his training in India, presented two papers in the Pediatric Ophthalmology Program of the Albanian Ophthalmologic Society meeting in October 2001 which was attended by 70 ophthalmologists from throughout Albania as well as several representatives from Kosovo, Macedonia, and Romania. Dr. Eugene Helveston, a respected US pediatric ophthalmologist has worked with IEF's sister PVO Orbis International to establish an electronic consultation system (*telemedicine*.) Two ophthalmologists from Romania presented this system at the meeting.

The development of leadership skills has been a critical component of this project and of the evolution of Albanian ophthalmology. HH has found the Leadership Training offered by the University Nur of Bolivia to be effective tool in strengthening leadership and management capacity within all HH field programs and is documenting the results as an on-going process.

UEC Outreach in the Region:

In February 2001, an HH team accompanied Dr. Zhugli and his UEC team to neighboring Kosovo and Macedonia to share their experiences in transforming the Albanian eye care service. This resulted in a signed agreement between the UEC and the eye clinic in Pristina, Kosovo to collaborate in the following:

- Standardize the residency training program and offer rotations for the residents in both programs.
- Coordinate and share continuing medical education (CME) opportunities.
- Share resources of educational materials, surgical instruments, etc.
- Publish a common ophthalmic journal.

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- Create a common plan for development of vitreo-retinal surgical capacity for the region.

Also in 2001, the UEC team visited Tetova, Macedonia where an agreement was reached that the UEC will help modernize cataract surgery to include intra-ocular lens implantation. Unfortunately, progress on this objective is on hold due to the unstable political situation in Macedonia, particularly around Tetova.

4. Instituto de Educacion y Prevencion en Salud Visual, Peru

Rationale for project:

The Institute's first "Seeing 2000" project (June 1997- May 1998) funded at \$25,000 greatly influenced the IEF to include ROP as a "Seeing 2000" priority. Dr. Luz Gordillo, a US trained pediatric ophthalmologist and "Seeing 2000" Project Director has developed a strong capacity to expand pediatric training and eye care focusing on Retinopathy of Prematurity (ROP) in Peru and the region.

Instituto de Educacion y Prevencion en Salud Visual (Institute of Eye Health: Education, Prevention and Treatment) is a registered non-profit NGO assisting children and their parents from the poorest and least developed areas of Peru. The principal mission of the Institute is outreach to provide communities with the knowledge and training necessary to prevent avoidable blindness, and is the only national organization focusing children's eye health. Eye disease is the principle cause of disability in children in Peru with 80% of it being avoidable through prevention or treatment.

The lack of ophthalmologists in Peru forces national efforts to focus on curative rather than preventive care. The Institute utilizes a multi-disciplinary team of professionals that combines medical, educational, and social communication strategies to motivate people, cultivate attitudes, and develop eye care habits that promote and preserve ocular health and sight. The Institute's goal is to *prevent* blindness and preserve sight in infants through early identification and treatment of eye disease, especially early detection and treatment of ROP.

Improved neonatal care in Peru and the region saves more premature and low birth weight babies. This increases the number at risk of blindness due to delayed eye examination and lack of resources to identify ROP, now a leading cause of childhood blindness in Peru and the region. The Institute coordinates prevention and treatment strategies with ophthalmologists, neonatologists, pediatricians and related health workers in Peru and throughout Latin America

and the Caribbean. The Institute was instrumental in developing the national protocol for examining newborns at risk of ROP.

Accomplishments:

Objective 1: Surgeries

Objective 2: Eye examinations

	Jun-Aug 2000	Sep-Nov 2000	Dec 2000 – Feb 2001	Mar-May 2001	Jun-Aug 2001
Eye Exams	31	43	48	42	30
Surgeries	2	2	4	4	2

Survey of Schools for the Blind

School	Number examined	Blind from ROP	% blind from ROP
Lima	98	23	23%
Chincha	11	3	27%
Cuzco	51	2	4%
Total	160	28	17.5%

Objective 3: Training

Examining and operating on babies weighing approximately two pounds are not skills learned quickly nor do many ophthalmologists wish to learn these skills and their associated risks.

Dr. Gordillo has trained Dr. Blanca Tirado Nieto in Lima under “Seeing 2000” and Dr. Nieto is now prepared to screen and treat babies with ROP, expanding the service within the Institute and other hospitals. One ophthalmologist from rural Arequipa received on-site training with Dr. Gordillo in August and September, 2000. Subsequently, a screening program for babies at risk of ROP was initiated in Arequipa, and infants are now referred to the Institute for specialized treatment.

Objective 4: Establish systems of monitoring

Dr. Gordillo and the Institute were instrumental in developing the national protocol for examination of newborns at risk for ROP that is now being used at the government run social security hospitals. Dr. Gordillo also developed a proforma to record eye exam information specific to ROP. This proforma has been shared with other “Seeing 2000” projects and other ophthalmologists in her region.

Objective 6: Raise awareness in professional communities

Date	Description	Ophthalm. attending	Other Med. Professionals
10/01/2000	Ophthalmology Medical Practice training in Arequipa at the NICU	3	10
10/11/2000	Ophthalmologist Lecture at 2 de Mayo Hospital – Lima	12	3
12/10/2000	Lecture at Neonatal Intensive Care Unit of Hospital E. Rebagliati – Lima	15	8
1/27/2001	Lecture at Colegio Medico del Peru	19	4
05/08/2001	"High Risk Newborn": ROP Follow up. San Marcos National University	10	15
06/20/2001	Retinopathy of Prematurity. Peruvian Association of Perinatology Lima	15	14
07/06/2001	Vitreous and Retina Diseases. Peruvian Society of Ophthalmology	20	15
07/06/2001	Childhood Blindness Peruvian Society of Ophthalmology	30	16
08/17/2001	National Committee Of Prevention of Blindness. Public Ministry of Health – Lima	12	5
08/31/2001	Importance of the timely ROP Diagnosis. Chiclayo	30	10
9/20/2001	Retinopathy of Prematurity Maternity Children San Bartolome National Hospital. Lima	2	35
09/21/2001	Retinoblastoma: Diagnosis and Treatment. Hospital Rebagliati - Lima	5	30
TOTAL		173	165

Objective 7: Raise awareness in general public

The Institute's educational and training activities reach out to the community at all levels with workshops on prevention of eye injuries, inappropriate use of traditional medicines, and the need for treatment of "lazy" and crossed eyes. Special care is taken to include women leaders and single mothers.

The Institute conducts workshops on eye disease for teachers and students in preschool, kindergarten and primary schools. Following this initial training, Institute staff and teachers work together in the classrooms to inform children about eye health and eye disease. As appropriate, children are referred for treatment (primarily for eyeglasses and eye patching). Public education materials have been produced:

- 4,000 Comic books on ROP were sent to Hospital Elias Santana (See Annexes), a past "Seeing 2000" grant recipient, in the Dominican Republic.
- 400 comic books were distributed in Lima and this is an on-going activity.
- 10 sets of a four comic book series and 6 flip charts were sold to eye care professionals in Buenos Aires, Argentina during the July 2001 Pan American Academy of Ophthalmology meeting
- 5 sets of a four comic book series and 4 flip charts were sold in Mexico during an ROP Workshop in October 2001.
- 50 comic books on the topic of diagnosing ROP were sold in Mexico.

Discussion:

Obstacles and Lessons Learned:

ROP is devastating to a family's emotional and financial resources when a premature baby survives only to realize too late that the child is blind or visually impaired because the necessary eye examinations and surgery were performed too late. Parents lash out and place blame, often directed at the ophthalmologist.

Peruvian ophthalmologists first denied the existence of ROP as an avoidable, preventable and treatable blinding eye disease because of the poor visual outcomes resulting from improper and delayed treatment. Dr. Gordillo held workshops to raise awareness within the medical community about ROP including the importance of early recognition and treatment of ROP. She built an alliance of pediatricians, gynecologists, obstetricians, and nurses as well as ophthalmologists. The acceptance of a national ROP protocol for Social Security

hospitals reflects the Peruvian ophthalmology community's recognition of ROP as a preventable and treatable blinding eye disease.

5. Lighthouse International and L. V. Prasad Eye Institute, India

Rationale for project:

This \$65,000 grant to the US PVO Lighthouse International (LI) based in New York City supports its partnership with the L. V. Prasad Eye Institute (LVPEI) in Hyderabad, India. The joint project has enabled LI to assist LVPEI to establish its new "Centre for Sight Enhancement and Rehabilitation of Blind and Visually Impaired." This new center of excellence has set service quality standards and serves as a referral and training center for the region. It has established a three-month, tuition-based Low Vision Fellowship program with two participants that is repeated four times each year, graduating eight fellows per year. The new Centre is meeting the needs locally for quality service delivery and training of low vision care providers.

LI is expert in the field of low vision and training low vision specialists using an established curriculum and methodologies to train individuals and training institutions to deliver clinical and rehabilitative low vision services. LI's Training of Trainers methodology develops the capacity of 'student' institutions to take on the role of training as well as service delivery. LI selected LVPEI because of its respected reputation as an international training institution having trained over 8,000 eye care professionals from under-developed, mid-level developing and developed countries in short and long-term programs, clinical and non-clinical, covering virtually every aspect of eye care.

LVPEI received two previous "Seeing 2000" grants totaling \$35,000. Funds purchased specialized anesthesia equipment and provided matching funds to construct a pediatric eye clinic within LVPEI.

Accomplishments:

Objective 2: Eye examinations

New and Follow up patients

Patients	Oct- Dec 2000	Jan- Mar 2001	Apr- Jun 2001	Jul- Sep 2001	Total
New	362	361	331	396	1,450
Follow-up	183	213	189	212	797
Total	545	574	520	608	2,247

New Low Vision Patients by Age Group

Years	Oct- Dec 2000	Jan- Mar 2001	Apr- Jun 2001	Jul- Sep 2001	Total
0-15	109	89	97	132	427
16-45	146	132	130	146	554
46-60	58	80	59	59	256
61 +	49	60	45	59	213
Total	362	361	331	396	1,450

Objective 3: Training

LI and LVPEI have trained the specialty staff for the new “Centre for Sight Enhancement and Rehabilitation of Blind and Visually Impaired.” LVPEI staffers, Dr. Sarfaraz Khan will manage the low vision training and services, and Ms. Sharmilla will manage the rehabilitation training and services.

- November 2000: Dr. Sarfaraz Khan and Ms. Sharmilla participated in a one week training course at LI Headquarters, New York City. Subsequently, Dr. Kahn and Ms. Sharmilla have conducted several training sessions on low vision at LVPEI using the LI methodology.
- February 2001: LI staff provided on-site follow-up training in conjunction with the Low Vision Awareness Program.
- April 2001: Because of the “Seeing 2000” grant and partnership with LI, LVPEI established a three-month, tuition-based Low Vision Fellowship program with two participants that is repeated three times each year, graduating six fellows per year. To date, two cycles of graduates have successfully completed training.

Date	Fellow Trained	Hospital
April – June 2001	Mr. Prem Kumar, Optometrist	Bhosle Gopal Rao Patel Eye Center, Mudhole, India.
	Ms. B. Sridevi Lavanya, Optometrist	Mullapudi Venkatarayudu Eye Center, Tanuku, India.
July-Sept 2001	Ms. D. Dhanalaxmi Optometrist	Regional Institute of Ophthalmology Government Ophthalmic Hospital, Chennai, India.

Objective 4: Establish systems of monitoring

Since inception of the “Centre for Sight Enhancement and Rehabilitation of Blind and Visually Impaired,” tracking and reporting systems have been put in place to monitor the number of patients receiving services and how many are receiving optical and non-optical low vision aids. This system tracks the increase in patient volume, what level of services they need, and what types of low vision aids are used most often within this patient population.

Optical Low Vision Devices Prescribed at LVPEI (adults and children)

EYEGLASSES	Oct- Dec 2000	Jan- Mar 2001	Apr- Jun 2001	Jul- Sep 2001	Total
For Distance only	77	79	75	91	322
For Near only	43	63	38	27	171
BIFOCALS	37	43	35	45	160
For Distance & Near Separately	-	-	-	7	7
Contact Lenses	-	-	-	-	0
Stand Magnifiers	94	64	100	67	325
Hand-held Magnifiers	42	43	9	23	117
Distance Vision Telescopes Monocular 2X & 4X	28	35	27	43	133
Total	321	327	284	303	1,235

Non-Optical Low Vision Devices Prescribed at LVPEI (adults and children)

Non-Optical Devices	Oct- Dec 2000	Jan- Mar 2001	Apr- Jun 2001	Jul- Sept 2001	Total
Reading Stand	63	32	26	29	150
Reading Lamp	23	20	14	22	79
Typoscope	-	-	-	-	0
Approach Magnification	256	262	276	237	1031
Light Control Devices	43	35	36	46	160
Closed-Circuit Television	-	-	-	4	4
Total	385	349	352	338	1,424

In addition to Low Vision services at LVPEI, services are provided by Low Vision fellows graduated from the April -June 2001 Low Vision Fellowship Program:

- Bhosle Gopal Rao Patel Eye Centre, Mudhole, India (July - Sept, 2001)

	0 –15		16 and older		Total
	Male	Female	Male	Female	
Refractive errors	6	7	132	159	304
Low Vision	2	0	5	2	9
Total	8	7	137	161	313

Mullapudi Venkatarayudu Eye Centre, Tanuku, India (July - Sept, 2001)

Types of Patients	Total
Refractive errors	300
Low Vision	21
Total patients seen	10,141

Objective 6: Raise awareness in professional communities

A “Low Vision Awareness Program” was held February 5-6 at the LVPEI. Thirty-five eye care and rehabilitation professionals upgraded their skills in low vision that enabled them to start working in the field of low vision. Lighthouse International faculty were Dr. Mary Ann Lang and Dr. Freed.

A “Low Vision Awareness Program” was held from September 28-30 2001 at LVPEI with 2 ophthalmologists, 10 optometrists and 3 rehabilitation professionals participating. The program included interactive sessions on Low Vision Devices and demonstration on low vision patient examination. In addition to the LVPEI faculty, guest faculty, and local and government social service agencies were represented.

Objective 7: Raise awareness in general public

To commemorate World Sight Day, LVPEI conducted a “Low Vision Awareness Event” on October 11-12th, 2000 that included a media campaign and two days of activities.

February 2001: Press conferences in Hyderabad included interviews with Dr Mary Ann Lang at LVPEI resulting in articles about the program and low vision which were featured in *The Hindu* and *The Times of India*.

LVPEI’s “Centre for Sight Enhancement and Rehabilitation of Blind and Visually Impaired” has an active public education program with the following activities:

-
- publishes 2 quarterly newsletter “LIGHT UP” and ‘SPANDANA’ for the general public.
 - conducts regular workshops and seminars for parents, summer camp for parents and children, orientation program for volunteers and field workers, community based rehabilitation services.
 - designed and printed brochures and leaflets on low vision for the general public.

Activities and achievements of the new “Centre for Sight Enhancement and Rehabilitation of Blind and Visually Impaired” are included in LVPEI’s quarterly and annual activity reports giving data and resource material on its various eye care activities.

Discussion:

Obstacles:

Due to the events of September 11, 2001, the plan for LVPEI staff to take a leadership role in south-south training of other international low vision care providers at LI headquarters in New York was postponed indefinitely. An alternate plan was devised where LVPEI Low Vision staff conducted a low vision course for Indian ophthalmologists and rehabilitation staff from the Aravind Eye Hospital (Madurai) in December 2001.

6. Orbis International, Ethiopia

Rationale for funding:

IEF has supported the eye care service in Ethiopia since 1972 starting with long-term volunteers in-country, the development of the National Blindness Prevention Program, and the development of the Ophthalmic Medical Assistant Training Program. IEF is supportive of sub-specialty training as an evolutionary development in Ethiopia. Additionally, IEF co-implemented a vitamin A deficiency control program with Helen Keller International in the 1980’s and a child survival program with Christian Children’s Fund in the last five years. IEF’s strategic interest is to strengthen partnerships with American PVOs to maximize resources needed to develop subspecialty services.

The Ethiopian office of Orbis, a US PVO, submitted the proposal which was funded at \$25,000. It also supports Orbis’ decentralization from US

headquarters-driven short-term activities to more national long-term sustainable programs.

The proposal addressed only one of the required objectives (sub-specialty training of an ophthalmologist to enhance their capacity to clinically and surgically treat children) and is to be achieved during the 12-month grant period. Dr. Abonesh Muane (female,) the sole ophthalmologist at Ras Desta Hospital in Addis Ababa, was selected for the pediatric fellowship being offered at the Storm Eye Institute, Charleston, South Carolina. Orbis/Ethiopia's long-term strategy is to increase the number of children receiving surgery by having Dr. Muane train newly graduating ophthalmologists at Addis Ababa University in pediatric surgical techniques.

Dr. Muane will continue an on-going mentor relationship with her US professor, Dr. Edward Wilson, for continuing support and professional development. Dr. Muane joined several other international ophthalmologists receiving training at Storm during the same period and from past experience, these relationships evolve into strong peer networks.

Accomplishments:

Objective 3: Training

Dr. Muane began her Fellowship at the Storm Eye Institute in Charleston, South Carolina under the guidance of her mentor Edward Wilson, MD, Head of the Department of Pediatric Ophthalmology, on 16 October 2000 and completed her fellowship on 30 September 2001. Of note, Dr. Wilson has served as an IEF visiting professor for a previous "Seeing 2000" project in Guatemala.

A brief summary of Dr. Muane's progress is outlined below from a Storm Eye Institute report of September 18, 2001:

- Dr. Muane is performing in accordance with the expectations of the Storm Eye Institute Pediatric Ophthalmology program.
- Dr. Muane is very responsive to the program dynamics and has displayed a good work ethic.
- No problems have been identified that would/did inhibit the implementation of this fellowship.

Goals and objectives are being met. To date, Dr. Muane is:

- Attending weekly topic discussions (having pre-read the assignments).

-
- Attending clinical sessions daily and actively examining patients and participating in discussions of treatment options and differential diagnosis.
 - Participating in surgery multiple times each week and has scrubbed with her mentor as an assistant.
 - Presented a paper outlining her pediatric plans in Ethiopia to an inter-specialty peer group and advisors at Storm Eye Institute. This peer group and Storm surgical advisors approved of Abonesh's plans in Ethiopia, and commended her for her excellent efforts and planning skills.

No pre-test was administered for base line clinical skills assessment. New clinical knowledge, skills and procedures learned by the fellow include:

- New clinical knowledge about childhood cataracts, strabismus (simple and complex), glaucoma, and retinoblastoma.
- New exam skills for children and adults including prism measurement of strabismus and retinoscopy of refractive errors.
- Surgical assistance has been practiced.
- Wet lab practice of trabeculotomy for congenital glaucoma has been practiced.
- Pediatric project development, planning and implementation skills. Practical experience in the context of the current state of eye health in Ethiopia, as experienced directly by Abonesh's mentor and advisory staff at Storm Eye Institute, combined with ORBIS Ethiopia eye care assessment data and Abonesh's field experience.

Discussion

IEF acknowledges the value of increasing the pediatric surgical capacity of one ophthalmologist who will play a critical role in the evolutionary development of pediatric ophthalmology in Ethiopia. This "Seeing 2000" project is a "training of trainers" model for developing local capacity, and also strengthens the global alliance of international eye care PVO/NGDOs.

7. Resources for the Blind, Philippines

Rationale for funding:

Outreach and low vision models have been targeted by "Seeing 2000" as priority areas. This project includes outreach, service delivery, and procurement of diagnostic and low vision equipment. Funded at \$35,000, it is initiating,

systematizing, and institutionalizing vision screening services into government schools where they did not exist prior to "Seeing 2000."

Resources for the Blind (RBI) was founded in the Philippines in 1980 to serve the spiritual needs of blind persons by distributing the Bible and scripture texts. RBI's services have since grown to include education of the visually impaired, rehabilitation of the blind, and blindness prevention. RBI has developed a strong capacity to treat children identified in new outreach initiatives.

The purpose of RBI's "Seeing 2000" project is to systematize and institutionalize eye screening of all first graders in the pilot district of Bulacan. RBI uses "Mr. E" which is an eye chart designed for testing children to identify vision of 20/40 or less. RBI plans to examine all first graders in all classrooms on the same day in the first month of each school year in order to completely integrate eye screening within the Department of Education, Culture and Sports. RBI's plan is to work in the single Province of Bulacan for a minimum of three years. This will enable them to work out difficulties prior to expanding the program regionally. Their aim is to create a model that can be used nationally to screen all first graders for eye problems.

Accomplishments:

Objective 1: Surgery

Number of Children	School Year 2000 – 2001	School Year 2001 - 2002	Outside the Bulacan screening program
Identified for Surgery	18	27	
Received Surgery to date	5	7	6 subsidized by "Seeing 2000"

Objective 2: Eye examinations

Baseline data for the screening of Grade 1 students in the Province of Bulacan is 0. Primary school teachers trained by the project screen the children at the 1st level. Children whose vision tested 20/40 or less are referred to the 2nd level of screening by an optometrist. If necessary, the optometrist refers children to the 3rd level for examination by an ophthalmologist.

Children:	School Year 2000-2001	School Year 2001-2002
Screened at 1 st level	48,379	57,501
Referred to 2 nd level	331	442

Screened at 2 nd level	236	237
Found with Refractive Error	80	82
Referred to 3 rd level	20	36
Examined at 3rd level	18	39
3rd level exam results		
Cataract	7 (7 of 18 = 39%)	8 (8 of 39 = 20.5%)
Corneal problem	10 (10 of 18 = 55%)	4 (4 of 39 = 10.2%)
Strabismus	1 (1 of 18 = 5.5%)	10 (10 of 39 = 25.6%)
Anisocoria (uneven pupils)	2	
Optic Atrophy		3
Nystagmus		2
Without eye disease		12

The number of school children screened at the 1st level (in school) increased by 19% in the second year. In the first year, almost one-half of the children referred to the ophthalmologist had cataract (7 of 18) and in the second year, approximately one-fifth had cataract (8 of 39.) This compares with the WHO estimates of congenital cataract of 12% for the region.

Objective 3: Training

Project Manager Dr. Joy Lim, Optometrist and Low Vision Specialist, is responsible for training school teachers how to measure vision and do basic exams on first grade school children to determine if they need to be referred for the next level of screening. In October and November 2000, she attended courses at Lighthouse International in New York City and the annual meeting of the Joint Commission on Allied Health Personnel in Ophthalmology in Dallas, Texas specifically focusing on low vision training and services.

Lighthouse International courses:

- Comprehensive Clinical Low Vision Care
- Pediatric Low Vision Care
- Consultations on Low Vision Practice management: Exploratory Consultation and Customized Service Planning.

Joint Commission on Allied Health Personnel in Ophthalmology courses were:

- Assisting in Low Vision: Steps to Helping Visually Impaired
- Eye Pathology Related to Low Vision Aid Prescription
- Models for Establishing a Low Vision Practice
- Managing Low Vision Rehabilitation Services
- Advanced Low Vision Optics
- Introducing Low Vision into the Office Practice

- Low Vision: Patient Centered Instruction
- Psychological Effects of Low Vision
- Low Vision Rehabilitation: A Systematic Approach

Objective 4: Establish systems of monitoring and surveillance

The “Mr. E.” chart was developed using the common “big E” used by the ophthalmic and Optometric community as a standardized means of testing visual acuity in children. Eye screening data for Grade 1 school children in Bulacan Province was not collected prior to the “Seeing 2000” project. Teachers now report the number of children screened and referred on annual basis to RBI.

Objective 5: Low Vision

Dr. Lim provides support to the low vision children who have been mainstreamed into regular schools, as well as support for their teachers and their parents. Additionally, she has prescribed and loaned low vision devices, as appropriate.

As of September 30, 2001, Dr. Lim has visited 13 schools and worked with 35 low vision students. Low vision devices were ordered over one year ago for the project, but did not arrive due to obstacles in the system noted below. However, now that they have arrived, this aspect of the program will grow.

Objective 6: Raise awareness in professional communities

The project trains primary school teachers to screen for visual acuity using the “Mr. E” chart. RBI staff train school teachers as trainers who then in turn, train additional teachers.

	School Year 2000-2001	School Year 2001-2002
RBI trained:	15 school teacher trainers	30 school teacher trainers
Trainers in turn trained:	1,100 primary school teachers	1,164 primary school teachers

During the June 2001 site visit, it was clear that the Division Nurse and Medical Director of the Bulacan Provincial Department of Education strongly supported the project. The Division Nurse independently sought funding for a refresher workshop on eye screening for teachers and held it outside the regular school session.

Bulacan Province has experienced similar, but unsuccessful projects. RBI has sought to gain the confidence and trust of the participating students, parents and teachers, and believes that the increase of 9,000 children screened in the second year results from the fact that children received the prescribed care (eyeglasses and surgery) during the first year of the project. The teachers' increased participation reflects their support of the project and the chances for sustainability in the future.

In first year, Dr. Joy Lim conducted all second level screenings at 70 different sites. The second year, 70 volunteer optometrists were recruited and screened the students. Although more timely, this was logistically complicated. RBI continues to seek a feasible, sustainable and quality care option for second level screening.

Objective 7: Raise awareness in general public

There are three main messages that relate to the "Mr. E." campaign and low vision:

1. Within the community: children's vision should be tested
1. Within the educational system: children's vision is important
2. For all: children with low vision can be helped and successfully mainstreamed in regular schools

Promotion activities included:

- Four paid newspaper advertisements placed in leading Manila newspapers directed at parents stating where to get the "Mr. E" chart and where to get help for vision problems.
- Advertisement ran five times in smaller local papers free of charge.
- 1,570 sets of "Mr. E." were distributed between October 2000 and September 2001.
- Nearly a year after the first ad was placed, requests for the "Mr. E" chart are still being received.
- Department of Social Welfare and Development magazine, distributed nationwide, included the "Mr. E." chart in one of its mailings.
- Television Public Service Announcement produced and aired 24 times during the month of October 2000.
- TV crew shooting special segment on "Mr. E" campaign to raise public awareness with no cost to the project.
- A local foundation asked if they could promote the "Mr. E" kit on the radio

Discussion

Obstacles and Challenges:

1. Patient compliance for surgery is low. Dr. Joy Lim meets with all parents to try to reassure them and to explain why the surgery is important. Some reasons for low compliance are:
 - Lack of anyone to accompany the child to the hospital for surgery.
 - No urgency seen to give up days of work in order for the child to be operated.
 - Fear that the operation will not help the child or might make the vision worse.

2. Delays in receiving shipments. Low vision devices were ordered in October 2000 and began to arrive August 2001. Therefore, the component of working with low vision students mainstreamed into regular schools was delayed but is now on-going. Problems were evidenced at all levels and included:
 - Missing UPS deliveries
 - Items out of stock
 - Miscommunication between RBI and the vendor.

Lessons Learned:

- Training school teachers to provide low vision services did not work as they did not possess the confidence to make decisions about low vision needs simply requested large print textbooks as the only option.

- Training an ophthalmologist is not a practical solution as ophthalmologists are in great demand and cannot dedicate the necessary time and services.

- Hiring Dr. Joy Lim, an Optometrist and Low Vision Specialist, full time has been a perfect solution as she can both train and provide services.

Unexpected Benefits:

- Following the first “Mr. E.” publicity campaign, RBI was initially disappointed with the limited number of requests for information. They

then sought other media options and selected television Public Service Announcements. RBI and IEF believe that for a relative low cost, the project reached a much wider audience as television is fairly common, even in poor communities where RBI is operating.

- Increased advertising and public awareness of the “Mr. E.” has created public awareness about the many services of Resources for the Blind.
- Publicity is helping to “brand” the “Mr. E.” as a “product”. RBI is exploring adding a low vision component to the instruction program within three leading optometrist schools in the country. They have expressed an interest and Dr. Lim is capable to initiating training.

8. Tilganga Eye Centre, Nepal

Rationale for project:

The Tilganga Eye Centre is a private hospital/NGO based in Kathmandu, Nepal. This project was funded at \$25,000 in 1997 and implemented in two phases. Phase 1, June 1997 through May 1998, costing \$15,000 emphasized increasing surgery and building pediatric anesthesia capacity. Phase 2, July through December 2001 at \$10,000, aimed to increase staff for screening eye camps and surgical eye camps. A strong focus was on the recognition of amblyopia (lazy eye) and its appropriate therapy. No report on Phase 2 results has yet been received at IEF headquarters.

Accomplishments:

At the start of the project, the Tilganga Eye Centre organized a large number of eye camps/screening programs, as well as continuing to develop eye hospitals, particularly in the eastern area of Nepal. These camps along with the large number of patients who attend the Tilganga Centre have resulted in a greater number of children with cataract being identified. Younger children not normally operated on in the outer districts are being referred to the Centre. To summarize the Phase 1 (1 June 1997 to 31 May 1999) report, training was conducted and clinical care provided:

Activities	Jun 1998 – May 1999
Pediatric surgeries	252
33% of surgeries were cataract w/ intra-ocular lens	84
Community Based Rehabilitation Workers trained in primary eye care, 17-22 November 1998	6
Pediatric Ophthalmology Workshop, 23-27 March 1999	

Objective 3: Training

Phase 2 included two types of training:

- Training of trainers in eye clinics. Trainers then train community level primary eye care workers on how to measure vision and screen children for eye problems. After training is completed, children in outlying areas will be screened and those needing further examination and treatment will be referred to the Tilganga Eye Center. Small training packages (basic equipment, an instrument set, medication and some eye health education posters, pamphlets, brochures, etc.) are given to the trainees.
- Ophthalmologists continue to upgrade their surgical techniques at Tilganga Eye Centre, especially for congenital cataract operations, in order to improve the visual outcome after surgery.

Discussion:

Unexpected benefits:

An unexpected benefit from Phase 1 was an improved capacity to use ketamine, a low-cost anesthesia drug used in children. Dr. Sanduk Ruit, Director of the Tilganga Eye Centre, and his national and international colleagues have become advocates for ketamine use under appropriate conditions. While the drug is very safe, it allows the child to move around and causes increased secretions that must be monitored during surgery. While it may not be appropriate for delicate intra-ocular surgery, it is extremely appropriate for "exams under anesthesia," retinopathy of prematurity exams and treatment, and strabismus (squint) surgery in children who will stay still.

In November 2001, IEF sponsored a round table discussion during the American Academy of Ophthalmology meeting in New Orleans to explore further the implications of ketamine use during pediatric eye surgery. Representatives from the Tilganga Eye Centre, other Seeing 2000 projects in Asia, and American pediatric ophthalmologists participated. Discussions are ongoing via the Seeing 2000 email network regarding risks, required human and technical resources for ketamine use, level of training of ophthalmologists operating on children anesthetized with ketamine, the use of anesthesia residents rotating to

rural hospitals for training, the length of time a child can be anesthetized with ketamine, and which pediatric patients are good candidates for ketamine, etc.

9. Volunteer Optometric Service to Humanity (VOSH,) Guatemala

Rationale for funding:

This \$25,000 project is a joint effort of Volunteer Optometric Service to Humanity-Pennsylvania Chapter (VOSH/PA) and the Vincent Pescatore Eye Clinic (VPEC) in Santa Elena, located approximately eight hours by bus from Guatemala City in the rural, underserved Peten region.

VOSH and VPEC began working together in December 1995 with the goal of eliminating treatable blindness in the Peten by 2010. Services were first provided using a mobile unit, then from a centrally located rental space. In April 2000, land was purchased to establish a permanent hospital to serve the Peten's population of over 500,000. Drs. Mariano Yee Melgar, Nicolas Yee Melgar and Antonio Hernandez Gallardo, ophthalmologists in private practicing together in Guatemala City, rotate one at a time every week to VPEC to treat eye patients. VOSH/PA visits VPEC in the Peten approximately once a year to provide training and clinical support.

Eye surgery for adults has been performed at VPEC for several years. VOSH recently donated anesthesia equipment allowing for adequate examination and surgery for infants and children locally.

The "Seeing 2000" project aims to increase eye exams and surgery for children age six and younger. Specific objectives:

- Train local health promoters to measure vision and identify children needing referral for treatment and surgery.
- Develop a monitoring and reporting system to track the numbers and ages of children who are examined and treated and they types of eye conditions treated.

Accomplishments:
Objective 1: Surgery

A total of 37 children were operated at VPEC between January and September 2001.

Pediatric Surgery at VPEC - January – September 2001			
Age	Male	Female	Total
0-6 months	0	0	0
7-12 months	1	1	2
1-2 years	5	4	9
3-6 years	8	9	17
7-9 years	2	3	5
10+ years	2	2	4
Total	18	19	37

Objective 2: Eye examinations

The six health promoters trained by the project screened 2800 children. Of these, 9.88% or 283 were referred to VPEC for further examination and treatment. Only 40% (113) of those referred actually went to VPEC. The Health Promoters are now responsible to follow up with the 60% (170) who were referred to VPEC but did not go. Approximately 70% (198 of 283 children referred) were referred for ametropia (need for vision correction.)

Pediatric Screening by Health Promoters January – September 2001	
Age in years	Total
0-6	22
7-12	1,475
13 and above	1,303
TOTAL	2800 (48% male/52% female)

Objective 3: Training

Six health promoters have been trained by the VPEC staff to screen children and were taught basic anatomy and physiology of the eye as well as the recognition of common eye conditions needing referral.

Objective 4: Establish systems of monitoring

A data collection system is now in place as a result of this project. No data were collected prior to the project because children did not receive eye surgery locally.

Discussion:

As no pediatric ophthalmology services were available before this project, the response by the local population has been extremely positive. The local health authorities in the Peten are aware of the VPEC clinic and its outreach activities and have been supportive.

Obstacles:

1. **Staff Recruitment:** This project experienced unanticipated delays related to staff recruitment as many employees wanted more job security and/or higher salaries. This delayed training and therefore, the proposed timeline. With the help of a social worker, six primary health workers are now in place who are conducting outreach and screening. As the outreach services expand and the population becomes more aware of the available services, it is expected that the number of children identified and treated will increase.
2. **Lack of pediatric anesthesia:** Exams under anesthesia and surgery were not performed on children due to the lack of specialized pediatric anesthesia equipment and anesthesiologist. VPEC's receipt of donated equipment and the assistance of two local anesthesiologists has made it possible for children to receive full diagnostic and surgical services. Dr. Juan Esteban Salazar travels from Guatemala City with the local volunteer ophthalmologists whenever children were scheduled for surgery. Recently, Dr. Linda Torres relocated to the Peten and provides anesthesiology services to VPEC whenever they are needed.
3. **Children referred to VPEC:** During the 2001 period, only 40% of the referred to VPEC by the Health Promoters actually went for further examination and treatment. The Health Promoters are now following up with the other 60% to learn why they did not go and how they can be helped.
4. **VOSH's 2001 visit to VPEC postponed:** Due to the events of September 11, 2001, a planned site visit by IEF that would have coordinated with a visit by VOSH/PA was cancelled.

Complementary IEF Programming:

In August 2001, Raheem Rahmathullah, IEF's Sustainability Specialist and David Green, MPH, Ashoka Fellow and IEF consultant, traveled to Guatemala to meet with Drs. Mariano and Nicolas Yee and Antonio Hernandez to explore support under IEF's SightReach® Management Program. IEF would focus on strengthening their management and financial capacity at their private eye center in Guatemala City and indirectly, the work they are doing with VPEC in the Peten. Drs. Mariano and Nicolas Yee participated in the "Manpower and Management Development Workshop" held from 17-23 January 2002 at the Lions-Aravind Institute of Community Ophthalmology in Madurai, India. They felt the course was very useful and have taken on the responsibility utilizing the plans and protocols they prepared during the course.

Annex B: Project History

The first project proposals were solicited in early 1996. Seventeen proposals were submitted and reviewed with nine projects beginning August 1, 1996.

Funded Projects were at the following institutions:

1. Aravind Eye Hospital, Madurai, India
2. L. V. Prasad Eye Institute, Hyderabad, India
3. Lumbini Rana- Ambika Eye Hospital, Lumbini Zone, Nepal
4. Lady Reading Medical College, Peshawar, Pakistan
5. Mt. Sion Centre for the Blind, Goroka, Papua New Guinea
6. Bulgarian Eye Foundation, Sofia, Bulgaria
7. Lions SightFirst Eye Hospital, Lilongwe, Malawi
8. International Centre for Eye Health, London, England (survey of South African Blind Schools)
9. Universidad Catolica de Chile, Santiago, Chile

Three additional projects, after providing further detailed information, were approved and began February 1, 1997.

1. Hospital "Rodolfo Robles V", Guatemala City, Guatemala
2. Roosevelt Hospital, Guatemala City, Guatemala
3. Hospital Elias Santana, Santo Domingo, Dominican Republic

The second round of proposals was solicited in early 1997. Eighteen proposals were submitted and reviewed with 8 projects approved for funding.

1. Instituto de Educacion y Prevencion en Salud Visual, Lima, Peru
2. Tilganga Eye Centre, Kathmandu, Nepal
3. Al Shifa Eye Hospital, Pakistan
4. Layton Rahmatullah Benevolent Trust, Pakistan
5. Zimbabwe
6. El Magraby Eye Hospital, Cairo, Egypt
7. Port Moresby, Papua New Guinea
8. All India Institute of Medical Sciences, New Delhi, India (activities were postponed until September 1999)

Four institutions received funding for a second year of activities:

1. Lady Reading Hospital/Hayatabad Medical Complex, Pakistan with second year activities beginning August 1, 1997;
2. L. V. Prasad Eye Institute, India with second year project activities beginning March 1, 1998;
3. Lumbini Rana Ambika Eye Hospital, Nepal with second year project activities beginning November 1, 1997; and
4. Lions SightFirst Eye Hospital, Malawi with programming beginning April 1999.

Three institutions received funding for a second year of activities, with activities on-going:

1. Bulgarian Eye Foundation, with second grant beginning November 2000
2. Instituto de Educacion y Prevencion en Salud Visual, Lima, Peru with second grant beginning June 2000
3. Tilganga Eye Centre with second grant phase beginning June 2001

First time grant recipients with on-going projects ending February 2002

1. Orbis International -Ethiopia
2. Resources for the Blind, Philippines
3. Volunteer Optometric Services for Humanity/Pennsylvania and the Vincent Pescatore Eye Clinic, Guatemala
4. Health for Humanity, USA and University Eye Clinic Albania
5. Lighthouse International, USA and L. V. Prasad Eye Institute, India

Annex D: Profiles

Bulgarian Eye Foundation, Sofia, Bulgaria

The Bulgarian Eye Foundation (BEF) began in 1991 with a Mission to improve the level of prevention and treatment of eye diseases, training of medical students and doctors of ophthalmology and public education in Bulgaria. Under the leadership of Professor Petja Vassileva, the objectives of the Foundation are carried out through collaboration with individuals and organizations interested in prevention of blindness and the mobilization of national and international resources.

Working in a country that is continuing to evolve and stand on its own after being in the shadow of the Communist Soviet Union for many years, the Bulgarian Eye Foundation's "Seeing 2000" project included subspecialty pediatric ophthalmic surgical training for seven ophthalmologists working in four different regions of Bulgaria. This expansion of subspecialty pediatric surgical skills is most notable as only approximately 10% of working ophthalmologists perform ophthalmic surgery and only a small percentage of those operating provide care to children. Six ophthalmologists received hands-on-strabismus training during an in-country visit of American pediatric ophthalmologist Dr. Robert Sargent. Dr. Petrov, one of the six participants, commented that the knowledge and skills learned during this visit remain with him today and enable to perform a higher level of strabismus surgery. He also positively commented on the value of receiving training in-country, within the realistic context of existing patient service delivery.

Bulgarian ophthalmologist, Dr. Lolova, participated in "south-to-south" training as she spent three and one-half months in India with Dr. Vijayalakshmi, an American trained pediatric ophthalmologist (and "Seeing 2000" grant recipient). She compared her knowledge gained during this short time working with Dr. Vijayalakshmi as equivalent to what it would have taken her three or four years to learn in Bulgaria.

Continuing the International Eye Foundation support of eye care activities in transitioning Bulgaria, the BEF's second "Seeing 2000" grant has enabled them to strengthen their management infrastructure. Recognizing that all eyecare services, not only pediatric care, is enhanced by a strong organization, this second grant supports training in management and organizational development and an emphasis on sustainability planning at Lions Aravind Institute of Community Ophthalmology (LAICO) in Madurai, India. BEF Executive Director, Ms. Yordanka Koleva, participated in a month-long course on Hospital Management and was joined by Prof. Vassileva, Dr. Petrov and BEF Board Member Mr. Simeon Popov for the "Vision Building Workshop" at LAICO. Ms. Yordanka Koleva and ophthalmologist Dr. Vladimir Chausey participated in the Quality Assurance Management Methods for Developing Countries in June 2001.

Tilganga Eye Centre, Kathmandu, Nepal

Tilganga Eye Centre's Mission Statement clearly proclaims its commitment "to meeting the needs of cataract blind in developing nations by providing high quality affordable intraocular lenses for use in modern cataract surgery and the provision of world class ophthalmic services to the people of Nepal and neighboring countries ...". The Centre recognizes the importance of good eyesight for those living in a remote developing nation and established itself to ensure the best available eyecare regardless of social and economic status through the use of modern and appropriate technology.

Their "Seeing 2000" project clearly exceeded the goals established by themselves and the program. With baseline data of 86, the number of children receiving needed surgery increased by 41.8% with 117 receiving surgery during the first year of their two-year project and 128 children being treated with surgery the second year. The momentum initiated during their "Seeing 2000" grant continued with 145 children receiving surgery after the end of their grant period. Achievements were even greater in regards to eye examinations with baseline data of 1,412 and first year results showing 2,238 children examined and second year data reports 2,759 children being examined. Delineated data reports 5,571 children at 37 schools were screened for eye disease during their "Seeing 2000" project.

Increased pediatric surgical activity and the high cost of intubation anesthesia led the Centre to look at ketamine as a viable alternative. It is their view that ketamine can be safely and easily administered to children and reduces prolonged post-operative recovery time and slow patient turnover. Administered by a pediatrician, the Centre now uses ketamine regularly on children, including operations lasting an hour to an hour and a half. With the support of an American pediatric ophthalmologist, the Centre's Medical Director Dr. Sanduk Ruit is preparing information for a paper and presentation on their successful use of ketamine that will be presented to the ophthalmologic community. Expecting a skeptical response, Dr. Ruit resolves that the anesthesiologists and their use of intubation anesthesia are unnecessarily controlling the cost (which impedes access and affordability) of pediatric ophthalmic surgery.

Not dwelling on obstacles, the Centre is looking to the future and expansion of their eye care services for children. High on their list of priorities is training an ophthalmologist in pediatric ophthalmology, who in turn will establish a pediatric fellowship program at the Centre. Training of ophthalmic assistants in orthoptics is also in their future plans.

L. V. Prasad Eye Institute, Hyderabad, India

The L. V. Prasad Eye Institute (LVPEI), a world-class eye hospital, provides eye care of the highest quality to all segments of the population, irrespective of race, gender and social and economic status. Over half of their services are for the economically underprivileged at no cost.

In 1995, LVPEI initiated their Children's Eye Care Centre. This Centre was fully realized December 1997 at the dedication of a separate physical Children's Eye Care Centre housed within the Institute. "Seeing 2000" grant funding, totaling \$35,000 for two grant cycles, matched contributed funds from individual and organizational donors to realize the building and equipping of a Centre dedicated to children's eyecare. This Centre provides a comprehensive range of services from low vision and rehabilitation services to clinical and surgical care. Centre staff provide care in all areas of ophthalmic subspecialty as well as subspecialty training. A Fellowship Program in Pediatric Ophthalmology is underway.

"Seeing 2000" grant funding purchased specialized anesthesiology equipment to enhance the ability to provide anesthesia to the very young infant. With the Institute's reputation for high quality care, its referral base extends to the entire country. Population for Andhra Pradesh (1991 census) report a population of 66.5 million and it is estimated that there are 12.6 million children under six years in this state alone.

Lighthouse International, an American Private Voluntary Organization specializing in Low Vision Services, recently received a "Seeing 2000" grant and is working with LVPEI to enhance their low vision services and develop a local training of trainers program in low vision services. Parallely, the Institute is developing low cost, low vision aids to fulfill the demand created through the expansion of their low vision services. Currently 2X magnifying telescopes have been produced with 4X telescopes under production.

Instituto de Educacion y Prevencion en Salud Visual is a non-profit organization working in blindness prevention and dedicated to serving the poorest and least protected sectors of the Peruvian population. To achieve its goal, the Instituto combines strategies in the areas of ophthalmology, education and social communication. The Instituto utilizes a multi-disciplinary team of professionals to motivate people, cultivate attitudes and develop eye care habits to promote and preserve ocular health and sight. Additionally, they provide early treatment for causes of blindness and visual disability in infants and children.

Based in Lima, home of 10 million Peruvians or nearly half of the country's population of 24 million, the Instituto's activities focus is on infants and children. Data shows that there are approximately 2.3 million children under the age of five -- of which 0.35% (8,400) are categorized as blind. Typically the prevalence of blindness is said to be 0.08%. The reasons for this increased prevalence is not known but the Instituto believes that Retinopathy of Prematurity (ROP) is the primary cause. Similar increases in childhood blindness and concern that ROP is the cause is shown throughout South America and other mid-level developing countries.

One of the Instituto's greatest concerns, and focus of their two "Seeing 2000" grants, is the prevention of blindness due to Retinopathy of Prematurity (ROP). Due to modernization of intensive care units of public hospitals, more and more low-birthweight premature babies survive and are at risk to develop ROP. Coordinating prevention and treatment strategies with ophthalmologists, neonatologists, pediatricians and other related health workers, the Instituto works to save the vision of these newborn children. It is critical that infants at risk for ROP receive proper and timely examination and treatment or they may irreversibly lose their sight in their first few months of life.

The Instituto's innovative efforts to increase awareness of eye health and eye disease among parents of newborns include the creation of a comic book series which addresses the need for early eye examinations for infants, follow up examinations and surgery when necessary. These entertaining and informative comic books are the cornerstone of the health education materials is developing. The Instituto is developing a cost recovery plan to market these comic books and other health education materials to hospitals, individuals and non-governmental organizations.

According to the 1993 Peruvian National Census, one out of three children have some degree of disability due to eye disease. Ophthalmic care for children in Peru is scarce due to the current lack of ophthalmologists trained to identify and treat eye disease in children as well as the lack of awareness in the community of the availability of eye care services. The Instituto's multi-pronged approach to reducing the prevalence and incidence of childhood blindness

Annex E: Excerpt from Activity



L.V. Prasad Eye Institute

Report April-June 2001

The story of three little girls Asrna, Rehana and Nazrna Sultana aged 5, 6 and 7, were pretty little maids in a row - as they skipped into the gates of L.V. Prasad Eye Institute in May this year. Their father, a daily wage earner, disappeared when he learnt that all his children suffered from a strange eye problem that could probably never be cured. The mother was now left to fend for herself and look after the girls.

The mother had heard about LVPEI, she put together her meagre savings to come here from Tandur approximately 100 km from Hyderabad, in search of a cure. The girls were diagnosed to have cone dystrophy, a hereditary eye disease found mostly among children of inter-family marriages. Nazma was studying in the first grade, Rehana in upper kindergarten and the youngest Asma in lower kindergarten.

The girls were extremely sensitive to glare, preferring to look down while walking and squinting or blinking against bright light. They were unsure of their movements in bright sunlight, as their vision was hazy. Since no medical or surgical treatment was possible, doctors at the Retina Vitreous Centre referred them to the Centre for Sight Enhancement for low vision care. Conventional glasses did not help, but their performance improved significantly when a gray tint was incorporated in the glasses. The children could read by holding the book close to the eye; they were also advised to use a peaked cap. Such simple devices stopped the glare from hurting their eyes. The mother was encouraged to help the children participate in outdoor games, to reduce the feeling of isolation they had at school. An advisory letter was also sent to the school about suitable seating positions for the girls to see the board.

For the team at the Vision Rehabilitation Centre the girls' case proved yet again that where medical and surgical intervention is not possible children with low vision can use simple adaptive devices to improve their functional performance and live a more 'normal' life.

Annex F: Meetings and Visits

"Seeing 2000" project staff and IEF Headquarters Meetings

1. October 30 – November 1, 2000
Evaluation site visit: Aravind Eye Hospital, Madurai, INDIA
Met with Health for Humanity project's trainee Dr. Dajti from ALBANIA
Dr. Roy Jacobstein, Dr. T. Otis Paul, Ms. Lori Carruthers ("Seeing 2000"
Program Coordinator)
2. November 2 – 4, 2000
Evaluation site visit: L. V. Prasad Eye Institute, Hyderabad, INDIA
Dr. Roy Jacobstein, Dr. T. Otis Paul, Ms. Lori Carruthers ("Seeing 2000"
Program Coordinator)
3. November 7-9, 2000
Evaluation Site visit : Lumbini Rana-Ambika Eye Hospital, Bhairhawa,
NEPAL
Dr. Roy Jacobstein, Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)
4. November 14-17, 2000
Evaluation site visit of Bulgarian Eye Foundation, Sofia, BULGARIA
Dr. Roy Jacobstein, Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)
5. November 27 –29, 2000
Evaluation site visit of Hospital Elias Santana, Santo Domingo, DOMINICAN
REPUBLIC
Dr. T. Otis Paul, Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)
6. November 30 – December 2, 2000
Evaluation site visit of Instituto de Educacion y Prevencion en Salud Visual,
Lima PERU
Dr. T. Otis Paul, Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)
7. April 8 – 14, 2001
Monitoring site visit of All India Institute of Medical Sciences, Delhi, INDIA
Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)
8. April 15 –20, 2001
Monitoring site visit of L. V. Prasad Eye Institute, Hyderabad, INDIA
Met with Health for Humanity project's trainee Dr. Dajti from ALBANIA
Ms. Lori Carruthers ("Seeing 2000" Program Coordinator)

-
9. May 14, 2001
Visit to Lighthouse International Headquarters, New York City, New York
Ms. Lori Carruthers (“Seeing 2000” Program Coordinator)
10. May 25 – June 1, 2001
Asia Pacific Regional Workshop on Low Vision in Hong Kong, CHINA
Current “Seeing 2000” grant recipients attending:
- Dr. S. Khan, L. V. Prasad Eye Institute and Member of the Meeting’s Scientific and Technical Subcommittee
 - Dr. Joy Lim, Resources for the Blind, PHILIPPINES
 - Dr. Mary Ann Lang, Lighthouse International, USA
 - Dr. Poudyal, Tilganga Eye Centre, NEPAL
- Past “Seeing 2000” grant recipients attending:
- Dr. Haroon Awan, formerly of Al Shifa Eye Institute, PAKISTAN and Secretary of the Organizing Committee and Chair of the Fund Raising Committee for the Meeting
 - Dr. P. Vijayalakshmi, Aravind Eye Institute, INDIA
 - Dr. M. D. Khan, Lady Reading Hospital, Peshawar, PAKISTAN
- Ms. Lori Carruthers (“Seeing 2000” Program Coordinator)
11. June 2 – 8, 2001
Monitoring site visit of Resources for the Blind, Manila, Philippines
Ms. Lori Carruthers (“Seeing 2000” Program Coordinator)
12. June
Participation in with the Bulgarian Eye Foundation
Ms. Victoria Sheffield (IEF Executive Director), Dr. John O’Neill (pediatric ophthalmologist and IEF Board Member) and Dr. Barrett Katz (IEF Board Member)

Visits to IEF Headquarters by “Seeing 2000” grant recipients

13. June 18 –22, 2001
Ms. Yordanka Koleva and Dr. Vladimir Chausey of the Bulgarian Eye Foundation
14. August 5-8, 2001
Dr. Harsh Kumar of the All India Institute of Medical Sciences

**“Seeing 2000” project personnel met during the 2000
American Academy of Ophthalmology Meeting in Dallas, Texas**

- Bulgarian Eye Institute: Dr. Petja Vassileva
- Hospital Elias Santana, Dominican Republic: Dr. Juan Battle
- Hospital Roosevelt, Guatemala: Dr. Quevedo
- Instituto de Educacion y Prevencion en Salud Visual, Peru: Dr. Luz Gordillo
- Lighthouse International, USA: Dr. Mary Ann Lang
- Lions SightFirst Eye Hospital, Malawi: Dr. Moses Chirambo
- Lumbini Rana-Ambika Eye Hospital, Nepal: Dr. Shrestha, Dr. Khadka
- L. V. Prasad Eye Institute, India: Dr. G. N. Rao and Dr. A. Mandal
- Resources for the Blind, Philippines: Dr. Joy Lim
- Tilganga Eye Centre, Nepal: Dr. Sanduk Ruit

Annex G: Trip Reports

“Seeing 2000” India Trip Report
All India Institute of Medical Sciences, New Delhi, India &
The L. V. Prasad Eye Institute, Hyderabad, India
April 8- 20, 2001
Submitted by: Lori Carruthers

1. All India Institute of Medical Sciences

Purpose:

- First site visit to project
- Discuss monitoring and evaluation indicators for Retinopathy of Prematurity (ROP) project and for training interventions
- Represent the International Eye Foundation at a ROP orientation workshop at Lady Hardinge Medical College
- Discuss status of Dr. Harsh Kumar’s ROP book
- Discuss and identify ways to increase visibility of project and ROP book distribution
- Discuss feasibility of regional ROP workshop

Project Overview

This program was originally approved for funding in 1997 and began September 1999 after Dr. Kumar (project designer and manager) returned from an overseas assignment. Project support includes: preparation of a book on ROP developed specifically for use in developing and mid-developing countries; data collection and analysis; and institutionalizing ROP screening and treatment at AIIMS and other sites.

The project is seated at the All India Institute of Medical Sciences (AIIMS), the national referral hospital within the government healthcare system in this country of people and is located in New Delhi with a population of million. The project has expanded to include Sarfardang Hospital (SH) (February 2000), approximately 15,000 births annually. Lady Hardinge Medical College (LHMC), annual births of 15,000 and a hospital serving primarily women and children, was added in September 2000.

Reporting Period	1 Qtr	2 Qtr	3 Qtr	4 Qtr	5 Qtr	Total
Children Screened at AIIMS	32	60	21	27	14	154
Children Screened at SH		16	31	78	52	177
Children Screened at LHMC:				14	20	34
Other centres	1		9	12	4	26
Total Children Screened:	33	76	61	131	90	391
Total # of Screening Exams	80	264	203	363	217	1,127
Total ROP Surgeries:	3	4	2	10	13	32

ROP, the leading cause of childhood blindness in the USA and most mid-level developing countries, is an eye disease that can not be prevented in the conventional sense. However, blindness from ROP can be avoided through timely and appropriate identification and treatment. Establishing and institutionalizing appropriate ROP screening programs is crucial to preventing avoidable and preventable childhood blindness. The window of time to effectively (i.e., with optimum outcomes) treat and operate on children identified with blinding ROP is very limited. Treatment

This project's approach (and very similar to the "Seeing 2000" program's ROP project in Peru with the Instituto de Educacion y Prevencion en Salud Visual) is to develop a cadre of neonatologists, pediatricians, nurses, anesthesiologists and ophthalmologists able to identify and treat this disease in a timely and appropriate manner. It takes time to develop the appropriate skills and confidence of medical staff to perform eye exams and surgeries on these premature newborns, weighing between 2 and 3 pounds at birth.

Dr. Kumar is training, overseeing and providing ongoing clinical support as well as data collection with the appropriate teams at Sarfardang Hospital and Lady Hardinge Medical Hospital. As the combined number of births at these two hospitals is over 30,000 per year -- a number equal to the number of annual births in some countries - outreach and awareness raising activities to the general public is planned for the *future*, when systems and skilled clinicians are in place to ensure quality care and surgical outcome.

Clinical protocols, health education materials in Hindi (for parents) and a poster listing the risk factors for ROP (for health facilities) have been developed. When asked about the use of health education materials, one of the mothers who had brought her child in for a follow up eye exam showed it to use along with her child's health card - obviously showing its distribution and its value to the mother. Other incidental information, from a doctor at Sarfardang Hospital,

stated that parents of premature babies are sharing information about ROP and early eye screening and referring parents to Sarfardang Hospital.

ROP Orientation Workshop at Lady Hardinge Medical College

Dr. Kumar began working with the ophthalmology and pediatric departments in September 2000 to orient them in the identification and treatment of ROP in the premature children born at their hospital, approximately 15,000 annual births. This is a government run hospital and its clients are primarily individuals and families with few financial resources.

As it takes time and effort to institutionalize new activities with added paperwork and reporting, this workshop was an effort to stress the importance and value of their work in order to promote greater commitment and involvement. A program for this Workshop is attached. Thirty to thirty-five participants were expected, however turn out for this workshop neared seventy individuals including ophthalmologists, nurses, and faculty. A diverse group of participants was desired in order to emphasis and reinforce the team approach to management of premature babies at risk for ROP. Most notable was the attendance of the Hospital Chief for the entire workshop.

NOTE: A schedule of the Workshop is attached. Also attached is a copy of the information given to participants including: ROP Screening Examination Guidelines; ROP Screening Form and a handout for parents in Hindi.

ROP Book

Dr. Kumar's book on Retinopathy of Prematurity is in its final edits before publication. There were some questions on the proper way to credit the International Eye Foundation and the United States Agency for International Development. Ms. Victoria Sheffield contacted USAID for clarifications and this correspondence is attached to this report.

Dr. Kumar strongly believes that his book will be a valuable tool for ophthalmologists, eye care institutions and Ministries of Health to reduce blindness from ROP and would like to identify the best way for his book to be available for wide distribution. Possible options mentioned included the World Health Organization, American Academy of Ophthalmology, International Agency for Prevention of Blindness and Vision 2020. Identifying a proper venue of distribution will take further research and investigation.

ROP Regional Workshop

Dr. Kumar and I have discussed via email the possibility of having a Regional ROP Workshop. This Workshop was also included in "Seeing 2000's" request for

a no-cost extension as a possible future use of “Seeing 2000” grant funds. The general purpose of this Workshop is to: disseminate screening criteria;

We also discussed the feasibility of expanding this workshop to include “Seeing 2000” grant recipients from Asia and Eastern Europe. Dr. Kumar and I will develop a more complete proposal for Workshop including appropriate objectives. We discussed the need to collect baseline data of participants knowledge and ROP activities prior to the workshop and the need for obtaining follow-up data

Summary, Recommendations and Follow up

Dr. Lakshmi is a potential candidate for the IEF to sponsor as an International Visitor/Guest at the American Academy of Ophthalmology (AAO) Meeting. He has worked with Dr. Kumar since this project began in September 1999 and has not previously attended an AAO meeting.

2. L. V. Prasad Eye Institute

Purpose:

- Meet with Dr. (Cimi), an Albanian doctor sponsored through Health for Humanity’s “Seeing 2000” grant to collect qualitative and quantitative information on his training to date.
- Observe low vision fellowship program developed at LVPEI following Lighthouse International’s Training of Trainers. Discuss and develop indicators appropriate to their training program and the low vision program.
- Discuss low vision needs and prepare for Low Vision meeting in Hong Kong
- Debrief LVPEI Hospital Administrator and Acting Director on the evaluation visit made November 2000

Project Overview

The “Seeing 2000” program has funded two earlier project proposals, a total of \$35,000, which supported the purchase of specialized anesthesiology equipment and provided matching funds for the construction of a center within the institute dedicated to children’s eye care service.

The current \$60,000 grant is funded through the American PVO Lighthouse International (LI) with headquarters in New York City. LI, an expert in the field of low vision, has an established curriculum and methodologies for training institutions and individuals to deliver low vision services. Their methodology of Training of Trainers includes developing the capacity of their ‘student’ institutions to take on the role of training as well as service delivery. LI is working with LVPEI to develop a “Center of Excellence” at LVPEI. A “Center of excellence is an institution that acts as a referral center

South-to-South, South-to-North Training

Dr. S Dajti (Cimi) is a Fellow receiving pediatric ophthalmic training, sponsored by a "Seeing 2000" grant given to the American PVO Health for Humanity. Dr. spent six months at Aravind Eye Hospital (July-December 2000) and has been at LVPEI since December 2000 and will return to Albania in June 2001.

(International pediatric fellows are limited to 6 months at Aravind Eye hospital and Indian pediatric fellows remain for 18 months.)

I discussed with Dr. Dajti his training at both Aravind Eye Hospital and LVPEI. His experience at Aravind Eye Hospital gave him the practical experience, knowledge and confidence to perform eye surgery on both adults and children. At LVPEI, in addition to practical experience he strengthened his skills in theory, research and subspecialization by working with cornea, retina and glaucoma specialists. We jointly developed a format for reporting on his training.

In looking to the future, Dr. Dajti discussed his desire to bring Dr. Anil Mandal to Albania for a training workshop - potentially in November. This would facilitate and enhance the eye care service development of the University Eye Care Clinic in Tirana Albania and potentially foster a south-to-north mentoring relationship between the institutions. Dr. Mandal is Head of LVPEI's Children Eye Care Centre and a glaucoma specialist. He has been faculty at the American Academy of Ophthalmology meeting and his book on Glaucoma will be published this year by an American publisher.

Low Vision

November 2000, Dr. Khan and Ms. Sharmula attended a week long workshop at LI Headquarters. February 2001, LI's Dr. Mary Ann Lang and Dr. attended a low vision awareness raising event at LVPEI with 37 attendees.

April 2001, LVPEI initiated a Low Vision Fellowship program with two participants. The Fellowship program lasts three months and will be repeated four times each, graduating eight fellows per year. The current fellows, are from two satellite hospitals of LVPEI and serve a rural community.

Evaluation visit debriefing

November 2000, LVPEI was one of six sites visited during the "Seeing 2000" evaluation. Dr. Roy Jacobstein (USAID Evaluator), Dr. T. Otis Paul (IEF Evaluator) and Ms. Lori Carruthers ("Seeing 2000" Program Coordinator) jointly visited LVPEI. Prof. Balasubrahmanian (Acting Director), Mrs. Ramam (Deputy Director and Hospital Administrator) and Dr. Anil Mandal (Director of the Children's Eye Care Center) received a copy of the evaluation report. They will forward a response to this report with approval from Dr. G. N. Rao.

Future Opportunities

Dr. Anil Mandal, Director of the Children's Eye Care Center and Congenital Glaucoma specialist has written a simple pamphlet which he hopes to publish and distribute to parents and ophthalmologists.

LVPEI's future pediatric activities

- Sight Savers International/India is sponsoring a two-day workshop/conference on Childhood Blindness May 19 and 20, 2001. The program for this workshop is attached.
- A one-year Pediatric Ophthalmology training program, funded through Vision 2020, will begin July 2001.
- A textbook on Congenital Glaucoma, written by Dr. Anil Mandal and Dr. Peter will be published in October 2001 and will be available during the 2001 American Academy of Ophthalmology.

CONTACTS

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Chief Dr. R. P. Centre

Prof. R. V. Azad
Professor of Ophthalmology
Secretary General of the National Society for Prevention of Blindness - India

Dr. Harsh Kumar
"Seeing 2000" Project Manager
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Dr. Rajiv Aggarwal (Department of Pediatrics)
WHO Collaborating Centre for Training and Research in Newborn Care
E mail: rajivreema@hotmail.com
Phone: 91 11 659 3209 Fax: 91 11 686 2663

Sarfardang Hospital

Dr. Harish Chellani (Neonatologist) Dr. B. P. Guliani (Ophthalmologist)
Dr. Vishal Guglani (Pediatrician) Dr. Baljeet Maini (Pediatrician)
N/S Kunjukunjamma Mathew (Nurse) N/S Tripta Lawrance Paul (Nurse)
N/S Kiran Mandal (Nurse)

Lady Hardinge Medical College

Kalawati Saran Hospital
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Prof. K. B. Logani
Director Kalawati Saran Hospital

Dr. Mrs. Pamela D'souza
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Annex G: Trip Report cont.

“Seeing 2000” Hong Kong Trip Report

May 28 – 30, 2001

Submitted by: Lori Carruthers

Purpose of attending the Workshop:

1. Represent the International Eye Foundation and the “Seeing 2000” program at an international forum on Low Vision. Low Vision, one of the five target areas of Vision 2020, is a priority for the “Seeing 2000” program.
2. Participate in policy development and other decision-making activities concerning Low Vision in the Asia Pacific Region.
3. Identify potential resources (individuals, institutions) for strengthening the technical capacity of “Seeing 2000” sponsored low vision program.

Attached to this report are the Program for the Workshop and the Presentation I made during the Workshop. Also attached is a summary of my presentation that was requested by the Scientific and Technical Subcommittee.

The following is a list of “Seeing 2000” grant recipients in the Asia Pacific. Those highlighted in bold indicate that participants from those institutions participated in the Workshop. Additionally, Dr. Haroon Awan, Pakistan Country Representative for Sight Savers International (and formerly of Al-Shifa Trust Eye Hospital and a “Seeing 2000” grant recipient) was a member of the Organizing Committee and the chairperson for the Fund Raising Subcommittee. Dr. Sarfaraz Khan of the L. V. Prasad Eye Institute and current “Seeing 2000” grant recipient was a member of Scientific and Technical Subcommittee. Dr. P. Vijayalakshmi of Aravind Eye Hospital and former “Seeing 2000” grant recipient was sponsored by the International Eye Foundation to attend this Workshop. All India Institute of Medical Sciences (Delhi, India)

- Al- Shifa Trust Eye Hospital (Rawalpindi, Pakistan)
- Aravind Eye Hospital (Madurai, India)
- Foresight (Australia) and Laila Foundation at Port Moresby General Hospital (PNG)
- Lady Reading Hospital and Hayatabad Medical Complex (Peshawar, Pakistan)
- Layton Rahmatullah Benevolent Trust
- Lumbini Rana-Ambika Eye Hospital (Bhairahawa, Nepal)
- L.V. Prasad Eye Institute (Hyderabad, India)
- Mt. Sion Centre for the Blind (Goroka, Papua New Guinea)
- Resources for the Blind (Manila, Philippines)
- Tilganga Eye Centre (Kathmandu, Nepal)

PRESS RELEASE received from the Organizing Committee following the Workshop

An international workshop on "Low Vision Care in the Asia-Pacific" was convened within the framework of "Vision 2020 - the Right to Sight" in Hong Kong from 28 to 30, May 2001. Vision 2020 The Right to Sight is a global initiative that aims to eliminate avoidable blindness by 2020. It was hosted by the Hong Kong Society for the Blind, co-sponsored by the World Health Organization, and supported among others by the International Agency for the Prevention of Blindness Task Force for Vision 2020, Sight Savers International, Dark and Light, International Eye Foundation and the Hong Kong Society for the Blind.

The Asia-Pacific Region includes three World Health Organization / International Agency for the Prevention of Blindness Regions (part of the Eastern Mediterranean, South East Asia and the Western Pacific); is home to half of the world's population and has a disproportionate share of the global burden of visual disability. It is an alarming fact that in respect of low vision care, less than 5% of the population are presently covered in this part of the world.

This workshop was attended by some 81 participants from 22 countries, including representatives from WHO, Non Government Organizations and professional bodies. Discussions centred around the steps needed to establish low vision services in member countries and to help promote both inter-regional and intra-regional cooperation among developed and developing countries.

In conclusion, it was stressed that there was a great and urgent need to expand access to low vision care and that it should be an integral part of health, educational, rehabilitation services and should be included in the national program planning for Vision 2020. There was a strong need to identify and train appropriate personnel for the delivery of these services, and it was emphasised that the feasibility of establishing low vision care would depend on the use of appropriate technology for the production of low vision devices.

As an outcome of the workshop, strategic country action plans and a regional framework for development of low vision services were formulated with recommendations for the development of low vision services.

It is envisaged that these recommendations and development of country and regional action plans will guide and accelerate the development of intervention programs for low vision care, thus bringing a positive change in the functioning and quality of life of millions of persons currently in need of services.

Programme of The Asia Pacific Regional Low Vision Workshop

Co-sponsored by the World Health Organization

PROGRAMME Day 1, 28th May 2001

10:00 - 10:30	Registration
10:30 - 10:45	Participants to be seated for the Opening Ceremony
10:50	Arrival of Officiating Guests
11:00 - 11:30	Welcoming address by Mr. Clive Oxley, Chairman of the Asian Foundation for the Prevention of Blindness (AFPB) and The Hong Kong Society for the Blind (HKSB) Address by Dr. Serge Resnikoff, Coordinator, Prevention of Blindness and Deafness, World Health Organization Address by Dr. Hannah Faal, President of International Agency for the Prevention of Blindness (IAPB) Opening Address by Dr. Susan Chan, Deputy Director (Operations and Business Support Services) of Hospital Authority (HA) Vote of Thanks by Mrs. Grace Chan, Chairperson, Organizing Committee of the Asia Pacific Regional Low Vision Workshop Presentation of Souvenirs by Chairman of The Hong Kong Society for the Blind to Dr. Susan Chan (HA), Dr. Serge Resnikoff (WHO) and Dr. Hannah Faal (IAPB)
11:30 - 11:40	Group Photo
11:40 - 12:30	Tour of the Jockey Club Multi-Service Centre for the Blind
12:30 - 13:30	LUNCH

IX. PLENARY SESSION 1 – LOW VISION: INTERNATIONAL AND REGIONAL PERSPECTIVES

Chairpersons : Mr. Clive Oxley, Dr. Bjorn Thylefors

13:30 - 13:45	Adoption of the Agenda Scope and purpose of workshop Expected outcome	Bjorn Thylefors
13:45 - 14:00	WHO's role in low vision care	Serge Resnikoff
14:00 - 14:15	Vision 2020 – global initiative	R Pararajasegaram
14:15 - 14:30	IAPB – global perspective	Hannah Faal
14:30 - 14:45	WBU	Subhash Datrang
14:45 - 15:00	APAO – programme priorities in Asia-Pacific	M Daud Khan
15:00 - 15:15	AFPB– report	Grace Chan
15:15 – 15:30	TEA/COFFEE BREAK	

PLENARY SESSION 2 – PROGRAMME PRIORITIES OF INGOS IN LOW VISION IN ASIA-PACIFIC

Chairperson: Ms. Janet Silver

15:30 - 15:45	CBM	Karin van Dijk
15:45 - 16:00	Sight Savers International	Ronnie Graham
16:00 – 16:15	Helen Keller Worldwide	Guy Le Fanus
16:15 – 16:30	ICEVI	Larry Campbell
16:30 – 16:45	PAHO	Lordes Medina
16:45 – 17:00	Dark & Light	Tom Herwijnen
17:00 – 17:15	Lighthouse International	Mary Ann Lang
17:15 – 17:30	International Eye Foundation	Lori Carruthers

PROGRAMME Day 2, 29th May 2001

X. PLENARY SESSION 3 – LOW VISION: SERVICE DELIVERY MODELS

Chairperson : Dr. R. Pararajasegaram

09:00 – 09:15 Service delivery models of low vision Alan Johnston
in developed countries

09:15 – 09:30 Service delivery models of low vision Janet Silver
in developing countries

09:30 – 09:45 Requirements for setting up a Jill Keeffe
low vision service for a population
of 10 million

09:45 – 10:00 Low cost low vision devices Hasan Minto

10:00 – 10:15 Formation of 3 Working Groups Evelyn Ambrosio

10:15 – 10:45 **TEA/COFFEE BREAK**

XI. WORKING GROUPS

10:45 – 12:00 Country papers as per working groups

12:00 - 13:00 Working Groups continue

13:00 - 14:00 **LUNCH**

14:00 - 15:30 Working Groups continue

15:30 - 15:45 **TEA/COFFEE BREAK**

15:45 - 17:30 Working Groups continue

PROGRAM Day 3, 30th May 2001

9.00 – 10.30 Working Groups conclude

10.30 – 10.45 **TEA/COFFEE BREAK**

10.45 - 13:00 Collation of Data and Compilation Chairpersons of Action Plan Secretariat
Rapporteurs

LOW VISION ORIENTATION WORKSHOP FOR PARTICIPANTS

Chairperson : Dr. Larry Campbell, Dr. Mary Ann Lang

10:45 – 11:05 What is a low vision service Alan Johnston

11:05 – 11:25 What is a low vision clinic Sarfaraz Khan

11:25 – 11:45 Prescribing low vision devices George Woo

11:45 – 12:05 What is low vision assessment Ian Bailey

12:05 – 12:25 Instruction/training in use of low vision devices Ian Bailey

12:25 – 13:00 Display of assessment materials and devices Joseph Cho

13:00 - 14:00 **LUNCH**

CLOSING SESSION

Chairperson : Dr. Serge Resnikoff

Presentation by Working Groups

14.00 – 14.20	Working Group 1	Rapporteur Group 1
14.20 – 14.40	Working Group 2	Rapporteur Group 2
14.40 – 15.00	Working Group 3	Rapporteur Group 3
15:00 – 15:15	Discussion	
15.15 – 15.30	Asia-Pacific Action Plan on Low Vision Hasan Minto	
15:30 – 15:45	Conclusions and Recommendations Hannah Faal	
15.45 – 15.55	Comments by IAPB Partnership	Catherine Cross
	Committee on Low Vision	
15:55 – 16:00	Vote of Thanks	R. Pararajasegaram
16.00 – 16.15	Concluding Remarks	Bjorn Thylefors

INGO's Program Priorities
May 28, 2001 in Hong Kong

Submitted by: International Eye Foundation
Bethesda, Maryland 20814 USA

Presenter: Lori Carruthers, MPH
"Seeing 2000" Program Coordinator

The title of this afternoon's presentation Program Priorities in Low Vision in the Asia Pacific. With key partnerships, the International Eye Foundation is actively supporting low vision programs and since 1996 we have supported 15 "Seeing 2000" grants in the Asia- Pacific Region.

Some of you may already know the IEF and some of you have participated in our "Seeing 2000" pediatric grants program. But what you may not know is that the IEF has undergone a recent reorganization including a streamlined statement of what we are about - Dedicated to helping people see!

So I would like to share with you this afternoon a bit of our evolutionary process that I hope will help you understand a bit more our program priorities and how that relates to low vision care and to the Asia Pacific Region.

The International Eye Foundation has tried to remain sensitive and aware of the challenging and changing needs of eye care services. And one of the main reasons of my participating in this meeting is to listen to what is being accomplished, to learn where are the needs and to further define the role that the IEF can take in Low Vision and in the Asia Pacific Region.

Briefly, I would like to go through the history of the International Eye Foundation. John Harry King Jr. founded the IEF in 1961. During the 1960's the IEF's focus was on direct service delivery. In the 1970's the focus was on training. In the 1980's, the focus was on expanding national eye care services. In the 1990's, the focus was on removing barriers of accessibility and affordability by addressing 1) the mal-distribution of eye specialists and 2) high cost of ophthalmic supplies.

Which brought the International Eye Foundation to the present and looking at the future:

- Improve quality of service outcomes
- Management efficiency
- Financial self sufficiency while maintaining an orientation to the poor

Supporting the IEF's mission and vision for the future, we have developed our four pillars that are supported by our three strategic program areas.

The first of our four pillars is:

- Expanding eye care services to those in need. Working with eye care institutions to expand both the types of services offered and to expand services into underserved areas.

Secondly,

- Supporting programs targeting avoidable blindness. Programs addressing cataract, river blindness, trachoma and childhood blindness.

Thirdly,

- Providing affordable ophthalmic equipment and medicines. Through our Gifts in Kind program and other donations, the IEF has distributed medicines, surgical supplies and equipment. Now through our social enterprise of SightReach Surgical®, the IEF is leveraging bulk buying power to purchase supplies and equipment in order to reduce the purchase cost to local ophthalmologists and institutions.

And our fourth pillar is:

Enhancing financial self-sufficiency of eye care providers to offer quality eye care services. Depending upon the needs of the providers, techniques include introducing and enhancing quality assurance measures, improving efficiency of management systems, improving patient satisfaction and service delivery. The International Eye Foundation aims to accomplish this through our three strategic program areas.

SightReach Prevention:

Targeting diseases responsible for most of the global blindness and low vision: cataract, trachoma, river blindness and childhood blindness and where my program - "Seeing 2000" a grants program supporting the enhancement of pediatric eye care services is based.

SightReach Surgical:

Reducing the price of service by eliminating the barrier of high cost by developing a social enterprise that sells high quality ophthalmic equipment, supplies and instruments.

And SightReach Management:

Facilitating the redistribution of eye specialists from urban areas to those underserved areas and enhancing the financial self-sufficiency of eye clinics and institutions.

And overlapping all of these goals and strategies there are the goals of Vision 2020. The Low Vision Goal ---one of the five target areas of Vision 2020 states:

Vision 2020 will enable access to visual devices and low vision care at affordable costs.

Which brings us back to the International Eye Foundation's goals of

- Improve quality of service outcomes
- Management efficiency
- Financial self sufficiency *while*
- Maintaining an orientation to the poor.

As we all know, and has been discussed more fully by previous speakers this afternoon, **quality** eye care services need to be **comprehensive**. Low Vision services are complementary to other medical and clinical services and may be necessary for some to have optimal vision, mobility and improved quality of life.

And improved efficiency and management of eye care service delivery reduces the overall costs and therefore enables access to low vision devices and low vision care at affordable costs - lessons the IEF learned in our pediatric eye care program "Seeing 2000". Like low vision care, services for childhood blindness do not offer a quick fix and are not easily identified and need specially trained providers. Services for pediatric eye care - and low vision care - can be expensive. Highlighting the need for improved efficiency in managing resources. This is an area in which the International Eye Foundation is focusing on with our partners, the development and enhancement of their management systems.

The strength of our "Seeing 2000" program has been our partners. And nearly half of our "Seeing 2000" programs have been in the Asia Pacific Region. An alphabetical listing of these partners is:

- All India Institute of Medical Sciences (Delhi, India)
- Al- Shifa Trust Eye Hospital (Rawalpindi, Pakistan)
- Aravind Eye Hospital (Madurai, India)
- Foresight (Australia) and Laila Foundation at Port Moresby General Hospital (PNG)
- Lady Reading Hospital and Hayatabad Medical Complex (Peshawar, Pakistan)
- Layton Rahmatullah Benevolent Trust
- Lumbini Rana-Ambika Eye Hospital (Bhairahawa, Nepal)
- L.V. Prasad Eye Institute (Hyderabad, India)
- Mt. Sion Centre for the Blind (Goroka, Papua New Guinea)
- Resources for the Blind (Manila, Philippines)
- Tilganga Eye Centre (Kathmandu, Nepal)

The "Seeing 2000" program is currently supporting two programs in Low Vision - both of which are based in this region.

Partnering with Lighthouse International and the L. V. Prasad Eye Institute, we supported a Training of Trainers Program that has facilitated the development of LVPEI's short-term fellowship in low vision and has the potential of greatly expanding low vision care as 8 optometrists per year will complete their fellowship.

Another project that we are supporting is with the Resources for the Blind in the Philippines. Again in partnership, Lighthouse International has provided training to enhance their technical capacity to provide low vision care and support for low vision students integrated into regular schools.

I recently visited the LVPEI and spent a great deal of time in their Centre for Sight Enhancement observing, especially their pediatric patients. Most of those that I saw were there because they were failing in school because of their inability to function in a regular classroom.

One thirteen-year-old boy had been out of school for nearly a year and spent that time at home, isolated. For me, a very bleak image. However, with low vision services and training on the use of a telescope and a stand magnifier, he has the *potential* to accomplish great things.

Like this young man, the International Eye Foundation, collaborating NGOS, our partners and Vision 2020 working together - we too have the potential to achieve great things and the achievement of the Vision 2020 goal of *enabling access to visual devices and low vision care at affordable costs*.

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"Seeing 2000" Program Coordinator**

The International Eye Foundation's streamlined statement of what we are about – *Dedicated to helping people see!* – will be accomplished by:

- Improve quality of service outcomes
- Management efficiency
- Financial self sufficiency *while*
- Maintaining an orientation to the poor

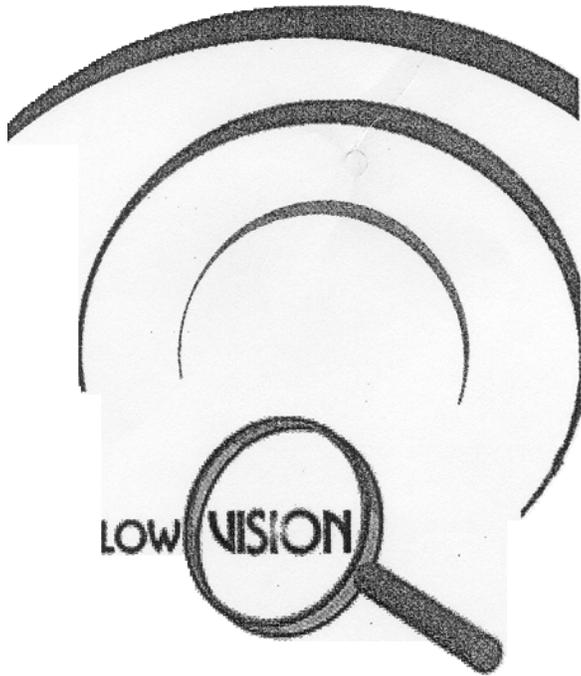
Supporting the IEF's mission and vision for the future, we have developed our four pillars that are supported by our strategic program areas.

- Expanding eye care services to those in need
- Supporting programs targeting avoidable blindness.
- Providing affordable ophthalmic equipment and medicines.
- Enhancing financial self-sufficiency of eye care providers to offer quality eye care services.

Overlapping our goals and strategies are the goals of *Vision 2020*. The Low Vision Goal – one of the five target areas of *Vision 2020* states: *Vision 2020 will enable access to visual devices and low vision care at affordable costs.*

As we all know, and has been discussed more fully by others this afternoon, **quality** eye care services need to be **comprehensive**. Low Vision services are complementary to other medical and clinical services and may be necessary for some to have optimal vision, mobility and improved quality of life. Improved efficiency and management of eye care service delivery reduces the overall costs and therefore enables access to low vision devices and low vision care at affordable costs – lessons the IEF learned in our pediatric eye care program "Seeing 2000". Like low vision care, services for childhood blindness do not offer a quick fix and are not easily identified and need specially trained providers. Services for pediatric eye care – and low vision care – can be expensive. Highlighting the need for improved efficiency in managing resources. This is an area in which the International Eye Foundation is focusing on with our partners, the development and enhancement of their management systems in order to provide comprehensive and quality eye care.

The International Eye Foundation, collaborating NGOs, our partners and Vision 2020 working together – we too have the potential to achieve great things and the Vision 2020 goal of enabling access to visual devices and low vision care at affordable costs. So I look forward to the remainder of this workshop and the opportunity that we have here to develop a regional plan that will address the low vision needs of the Asia Pacific Region.



**LOW
VISION
TRAINING
PROGRAMS**

LOW VISION TRAINING PROGRAMS

The need for training programs

There are an estimated 45 million people BLIND worldwide, and an additional 135 million people with LOW VISION. (WHO – publication/97.61 Rev 1)

Unless rigorous and large-scale preventive measures are undertaken the number of people with low vision may double by the year 2020. International organizations are now collaborating to implement the World Health Organization (WHO) global initiative for elimination of avoidable blindness through the Vision 2020 program, which has low vision care as one of its prime objectives.

Even today most ophthalmologists and optometrists are unfamiliar with low vision care, which can otherwise enable patients to utilise their residual vision to make fuller use of their educational and vocational opportunities. To maximize the available professional potential it is desirable to increase awareness and develop their skills in low vision care through quality training programs.

Vision Rehabilitation Centres at LVPEI

LVPEI is committed to providing affordable, comprehensive care and rehabilitation and has developed excellent services in Hyderabad, India. Its two Vision Rehabilitation Centres - the Meera & L. B. Deshpande Centre for Sight Enhancement and the Dr.P.R.K. Prasad Centre for Rehabilitation of Blind and Visually Impaired - work towards enhancing the quality of life of people who are blind or have low vision.

LVPEI offers training programs in low vision care and rehabilitation for all cadres of eye care professional, in collaboration with Lighthouse International, New York, USA and Bartimous, The Netherlands. Both these organisations have vast experience and expertise in this field and have designed and conducted programs all over the world.

ORIENTATION WORKSHOP MODULE ON LOW VISION AWARENESS

Curriculum:

- An overview of low vision
- Clinical low vision assessment
- Low vision: Functional implications of eye disease
- Paediatric low vision
- Low vision devices : Optical & non-optical
- Theory & practical demonstration
- Clinical set-ups
- Rehabilitation services(counseling, orientation and mobility, community-based rehabilitation, daily living skills, support services, etc.)

Eligibility: Ophthalmologists, optometrists, rehabilitation professionals – preferably institution based. Thirty persons per workshop.

Duration: 3 days – two programs per year

SHORT TERM FELLOWSHIP PROGRAM IN LOW VISION

Curriculum:

- An overview of low vision
- Vision classification system
- Visual perception
- Low vision environmental assessments
- Observational factors
- Case history
- Identification of visual needs
- Psychological factors
- Motivation

Clinical aspects of low vision:

- Distant and near-point acuities
- Low vision refraction
- Visual fields
- Binocularity
- Color vision
- Determination of magnification
- Assessment of illumination
- Evaluation with low vision devices
- Training in use of low vision devices
- Prescription of low vision devices

The curriculum also includes training in low vision devices - their individual characteristics, advantages and disadvantages; clinical set-ups, resource mobilization and utilization. All aspects of rehabilitation - such as counseling, orientation and mobility, daily living skills and support services - will also be a practical part of the course. Interaction with patients, their parents and the community is also an integral part of the course.

Eligibility: Candidates with a minimum qualification of Diploma in Optometry and Masters degree or Diplomate from the National Board of Examination in Ophthalmology will be eligible. Two persons per session - six persons per year

Duration: Three months - three programs per year *Both programs are partially funded by the Sir Ratan Tata Trust, Mumbai, India.*

For more information contact

**Dr. P R K Centre for
Rehabilitation of Blind and Visually Impaired**

**Meera & L B Deshpande Centre
for Sight Enhancement**

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Annex I Other Photocopies

ROP Book Cover

ROP Comic Book #1 of 4