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**PROJECT SEE FINAL REPORT**  
**PROJECT SEE (SUSTAINABLE EFFICIENT EYECARE)**  
**OCTOBER 1993-SEPTEMBER 1996**

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Moroccan girl with spectacles  
operated at the Centre Hospitalier Universitaire  
in Rabat, Morocco

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**PROJECT SEE FINAL REPORT**  
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## I. MEXICO

### BACKGROUND

Project SEE (Sustainable, Efficient, Eye Care) started working in Mexico to prevent blindness and provide eye care services in 1993. The programs and services that currently exist in Mexico were built from scratch; there were very few programs and services existing in Mexico for HKI to build upon. With this in mind, HKI has come a long way toward introducing and setting a precedent for eye care programs while ensuring their sustainability. In the Baseline Survey of Eye Disease completed in 1994, refractive error, senile cataract and pterygium were identified as main causes of blindness in Chihuahua State, Project SEE's target area.

### MAJOR RESULTS OVER THE PAST THREE YEARS

*"With ocular health or blindness as the rallying point, all significant governmental and community elements have come together for what I believe is the first time such a comprehensive scale to work together cooperatively toward a common goal. Already, at this early stage, people are asking what more, aside from eye care, can be accomplished by this community synergy."*

Dr. Maynard Wheeler, USAID evaluator; September 1995

1. HKI has succeeded in its catalytic role to mobilize financial and human resources from major Mexican health institutions, i.e., Fomento Social and Integrated Family Development (DIF). By donating strategic equipment, HKI has convinced the government to position ophthalmologists in Cd. Chihuahua's state-run hospital for the first time. Furthermore, the Chihuahua Institute of Health's (ICHISAL) budget devoted to eye care is growing steadily from \$0 in 1994, to \$42,500 in 1995, and to \$88,000 in 1996.
2. Project SEE has been seen almost exclusively as a Mexican project mainly because of HKI's efforts to mobilize local groups to support Project SEE's goals. These include six federal and state agencies and five non-governmental organizations.
3. ChildSight<sup>SM</sup> was launched in October 1994 in Cd. Juarez. The successful pilot of this program established a model and proved the cost-effectiveness, benefits and sustainability of the program model to the Chihuahua State Government. Two donors, Chase Private Banking and Reuters, financed the demonstration of ChildSight<sup>SM</sup>. As of 1996, local government in Cd. Juarez covers salaries of nurses and will cover the cost of a program coordinator for ChildSight<sup>SM</sup>.
4. The Childhood Blindness Initiative in Mexico has focused on data collection of children with congenital cataract, their surgery and followup. These data are being analyzed on 41 children who were operated and received post-operative followup for a minimum period of three months. Over 50% of children had three months post-operative followup.

## I. Summary of Project Accomplishments and Weaknesses

### A. Accomplishments

#### 1. Increased mobilization of human resources

Training -- From October 1994 to September 1995, HKI Consultant Trainer, Cindy Goodale, and the HKI Country Representative, Dr. Joaquin Tovar Diaz, conducted training in primary eye care for 132 teachers, health assistants, social workers and nurses in Cd. Juarez. In 1995, 241 teachers, principals, school staff, nurses, doctors, social workers were trained in primary eye care, referral and followup. In 1996, 1,004 doctors, nurses, primary school teachers, Rotary volunteers and nurses from industry were trained in primary eye care.

ChildSight<sup>SM</sup> -- In October 1994, HKI launched ChildSight<sup>SM</sup> in Cd. Juarez. The State of Chihuahua seeks to take over and sustain ChildSight<sup>SM</sup>; they intend to add the number of DIF workers to the program and hire a program coordinator.

Local PVO Support -- Two Committees Against Blindness in Chihuahua and Juarez and the Eye Health Program were established to work with relevant political, health and business authorities.

Initial resistance by the College of Ophthalmology in Chihuahua and Juarez has been overcome. Six ophthalmologists now donate their time for services and training health care workers.

#### 2. Increased mobilization of financial and material resources

1,000 copies of HKI's *Primary Eye Care Manual* was printed and paid for by ICHISAL and DIF; \$7,000 was given for equipment by a group of businessmen from Camargo City to the Lions Club City; Gifts-in-Kind of sutures and intraocular lenses were utilized (See Appendix 1).

Local Government Support -- With HKI as a catalyst, the state has further mobilized human resources by paying for two ophthalmologists to work in the public hospitals to attend to patients who do not have medical insurance. The state has never before paid for ophthalmologists to work in the public hospitals. The state will equip the doctor's offices with the necessary medical equipment and pay for examinations for cataract surgery at a cost of about \$15 each. It will contribute \$100 towards hospital expenses for one anesthesiologist, one nurse, one nurse assistant, and medical material. A breakdown of costs for the time of anesthesiologist and nurse is \$1,500.

Surgeries done in la Sierra will be paid for by the state. They will cover traveling expenses of patients of approximately \$90.

Headway to sustainability was achieved with the agreement of the Chihuahua State Government to add \$80,000 to their 1997 budget for eye care/health services.

## B. Weaknesses

1. The unexpected slow start of the project and slow implementation of the survey was a consequence of HKI's inability to recognize how entrenched and disjointed the Mexican Health System is, especially in regards to eye care. There are four major health care providers for the different sectors of the Mexican population. This tangle of health providers resulted in an initial delay by government to sustain the program.
2. Prior to 1995, the Mexican Government spent very little money on surgeries and primary eye care, thus most expenses were covered by HKI. This method was deemed non-sustainable and the strategy was therefore altered to demonstrate that eye care could be sustained in a cost-effective manner.
3. A large number of surgeries have been performed by HKI's former Country Representative and not by the government, a strategy that was later deemed unsustainable.
4. While the training was well conceived and articulated by HKI's Training Director and consultant, it was poorly implemented in Mexico using sterile and one-way training techniques. The Training Director visited the program and gave helpful direction.
5. Because of the small number of children with congenital cataract in the State of Chihuahua, a partner was identified in Mexico City where congenital cataract surgery is being done.

## II. Description of Activities

The following Project SEE I activities have taken place in Mexico with HKI acting as a catalyst and advisor:

A. A Baseline Survey of Eye Disease was begun in October 1993 with the collaboration of Instituto Chihuahuense de la Salud (ICHISAL) and Desarrollo Integral de la Familia (DIF). The study was presented by HKI's Executive Director, John Palmer, in March 1995. It surveyed 2,354 persons aged 0-65 years old in the State of Chihuahua. The findings showed that the rate of blindness is 2.1% which exceeds the WHO's criterion of .05% for blindness as a public health problem. The top three main causes for blindness are refractive error, pterygium, and senile cataract.

B. Training workshops have been an important part of HKI's efforts to institutionalize primary eye care and the ChildSight™ Program. The training content for the ChildSight™ program includes: Primary Eye Care, Distance Visual Acuity (DVA) testing, detection of common refractive error and organic problems through pin hole test, first aid for urgent referral cases, and post-operative follow up. Objectives for the training of rural doctors, nurses, community health workers, teachers, and medical doctors in the industry have been determined. These objectives correspond to following an efficient eye care prevention model that was created and has been applied in Chihuahua. A lead training team has been formed and consists of an anthropologist, an ophthalmologist, nurse, and trainer of trainers.

C. The ChildSight<sup>SM</sup> Program has provided a free vision screening, a free refraction, and 1,339 pairs of eye glasses to 11-14 year olds who need them. A solid foundation for sustainability is being established, for example, the Government of Chihuahua is paying for the nurses who work in the program to assemble glasses.

Table 1. Project SEE Mexico  
Glasses Distributed through ChildSight<sup>SM</sup>

Years	Glasses Distributed
October 1994-September '95	300
September 1995-April '96	776
April 1996-October '96	263
Total	1,339

D. Surgeries are being performed, but only in a manner that presumes and requires the acquisition and maintenance of the State Government for the long term. In 1995, 197 surgeries were performed on surgical missions and in 1996, 90 surgeries were done in government hospitals.

E. Childhood Blindness -- Records were collected and analyzed on 41 young children (61 eyes) operated.

F. Public Awareness Campaigns -- The government paid for two articles per month to publicize the eyecare program; one TV interview every two months; 5,000 pamphlets with information about organizations involved in rehabilitation of the blind; 1,000 posters with tips on eye care; 1,000 books on Primary Eye Care and 500 books for parents with blind children.

### III. Strategy/Approach

A. The following is a list of the federal and state agencies providing health services to various segments of employed, unemployed and indigent citizens in urban and rural areas of the State of Chihuahua:

Chihuahua Institute of Health (ICHISAL)  
 Division of Social Development (Fomento Social) - HKI's major counterpart  
 Mexican Institute of Social Services (IMSS)  
 Institute for Social Services for State Workers (ISSSTE)  
 Integrated Family Development (DIF)  
 Secretariat of Public Education (SEP)

Non-Governmental Organizations, Professional Associations and Civic Clubs:  
Association to Avoid Blindness (APEC) (in Mexico City)  
College of Ophthalmologists  
Lions and Rotary Clubs  
Louis Braille School  
Study Center for the Blind

**Personnel Change for the Position of Country Representative:**

Lic. Carla Herrera replaced Dr. Tovar in May of 1996 and has been able to approach and present to Government officials our innovations for primary eye care.

B. HKI works within hospitals to help with strategic equipment, such as cataract sets, intra ocular lenses and sutures, so that increased cataract surgical output can be obtained.

**C. HKI's methods and strategies for effective training are three-fold:**

HKI sent a training consultant who developed a Primary Eye Care training manual (See Appendix 2) and workshop materials. The Director of Training visited and developed a Trainer of Training (TOT) strategy and curriculum. Training materials were developed and revised simultaneously. A Snellen Acuity Eye Chart was developed and 1,500 copies were distributed (See Appendix 3).

**D. Equipment**

Recognizing that equipment was a major stumbling block for increasing cataract surgery output, an operating microscope and two cataract sets were procured. Thus, for the first time, cataract surgery was performed under government auspices in Chihuahua Hospital.

Gifts-in-Kind of intra ocular lenses and sutures were donated (See Appendix 1). HKI's Country Agreement and official clearance to donate equipment and supplies to Mexico are found in Appendix 4.

**E. Surgical Methods**

While working with Lions Clubs and one ophthalmologist enabled 197 surgeries to be done in 1995, this method was not deemed sustainable in the long term for a state program. Therefore, HKI leveraged government resources, i.e., salaries of ophthalmologists and of anesthesiologists, so that surgery can be performed on an on-going basis throughout the state of Chihuahua.

**IV. Comments and Recommendations re: unfinished work and/or program continuation and direction**

Project SEE established an important and firm foundation for continued programmatic growth in collaboration with the local government and community groups. Taking into consideration the project's accomplishments and failings, much has been learned which will greatly inform and benefit the continued work in Mexico. Project SEE II's work is clearly laid out.

Its goal is to institutionalize services for the prevention of blindness, the treatment of eye disease, education and rehabilitation of blind persons in Chihuahua State through five program components:

Institutional development in each of the following program components is the next step towards sustainable systems change. HKI and the Chihuahua State Eye Health Team need to continue training local personnel in government and non-government organizations for subsequent implementation of project activities. HKI will also support the two ongoing Committees Against Blindness.

Specific program activities which have been innovated, replicated and now need to be institutionalized within the current structure are:

**Primary Eye Care** -- HKI plans to complete the integration of eye care service delivery through various sustainable methods such as training, local collaboration and creating stakeholders, and public awareness campaigns;

**Children's Eye Care Services** -- Childhood Surgery seeks to operate on 100 cases of congenital cataract per year; ensure proper follow-up through 6 months post-operative care; and raise parental awareness of importance of follow-up well into the child's teenage years;

**ChildSight<sup>SM</sup>** -- Provide vision testing and delivery of eye glasses to school children;

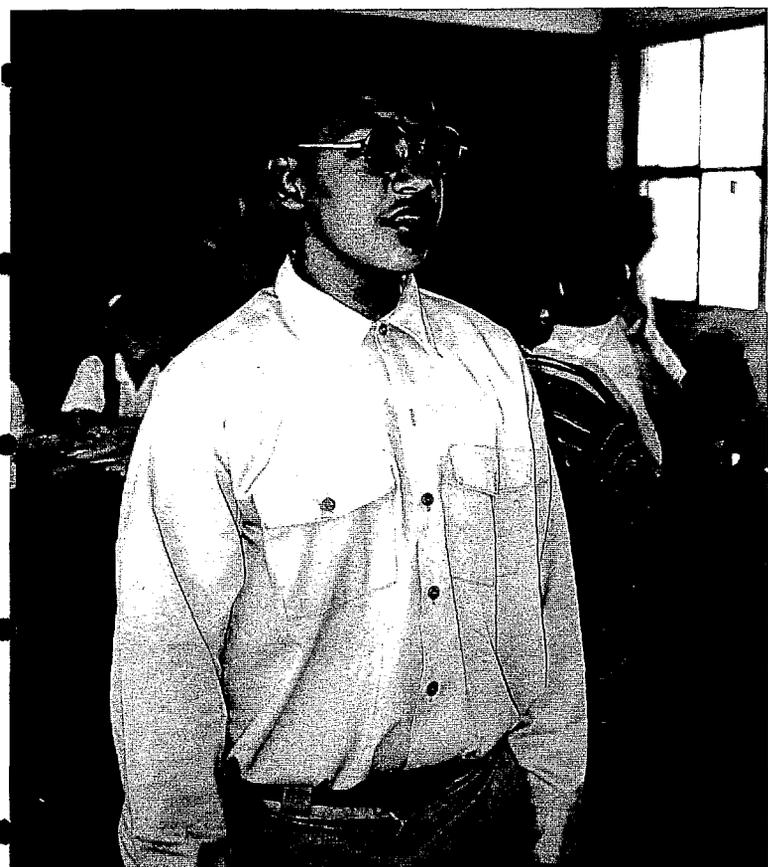
**Nutrition** -- Implement activities in selected communities of La Sierra to promote more frequent food consumption of vitamin A rich foods through the development of cooperative gardens; and

**Education and Rehabilitation** -- Assist blind children in development of skills to enter public school, facilitate job training and placement through local businesses for the incurably blind; train trainers to assist blind persons to develop skills in orientation and mobility (O&M) and daily living.

## MEXICO

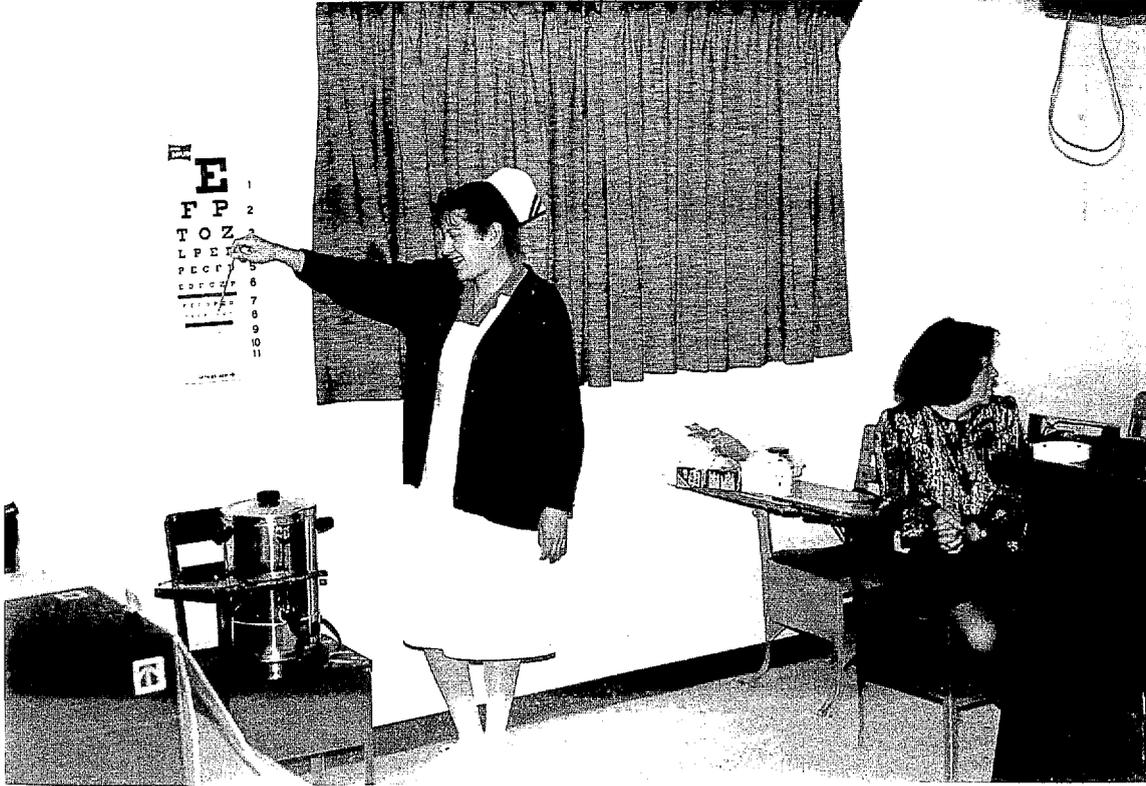


Carla Herrera, Country Representative for Mexico, greets a nurse from the Desarrollo Integral de la Familia (DIF) for the Childsight<sup>SM</sup> Training in Cd. Juarez, Mexico.



October 1995-October 1996  
ChildSight<sup>SM</sup> Program has tested vision and given glasses to 1,076 students in Cd. Juarez and Cd. Chihuahua

# MEXICO



Project SEE funded the training of nurses in visual acuity testing and assembly of eye glasses. Salaries are paid by the local government for the ChildSight<sup>SM</sup> Program in Cd. Juarez, Mexico



Michael Stott of Reuters in Mexico for the official launch of ChildSight<sup>SM</sup>-- a program which provided 763 school children with an exam and eye glasses. Reuters supported the match of funds

## II. MOROCCO

### BACKGROUND

According to a national survey conducted in 1992, the prevalence of blindness in Morocco, 0.76%, exceeds the WHO criterion of 0.5% and therefore constitutes a problem of public health proportion. The adult cataract backlog is approximately 287,000 persons nationwide. Congenital blindness represents 7% of total blindness. Approximately 4 million Moroccans need eyeglasses.

### MAJOR RESULTS OVER THE PAST THREE YEARS:

*"Integration of primary eye care, decentralization of [eye surgery], [treatment] of childhood blindness among children under 15 years have known a frank success thanks in part to the technical and material assistance from Helen Keller International, and its serious Director, Mme Akalay, and the solid engagement of all eye health professionals at every level of competence and responsibility."*

The Minister of Health, Dr. Ahmed Alami, 1995

1. The eye health budget submitted and approved by Moroccan Government for the *Programme Nationale de Lutte Contre La Cécité (PNLC)* has increased three-fold. Project SEE has leveraged new resources from the French, Belgian and American governments. A unique public/private partnership between the Ministry of Health/Morocco and Pfizer has been facilitated by HKI to study the effects of azithromycin on trachoma (See Appendix 5).
2. Two Childhood Blindness Centers were established in Casablanca (to serve the southern region) and Rabat (to serve the northern region). Medical records on 149 children have been entered on a simplified system using EPINFO software. In our sample, HKI found that 26% of the cases had a related parent and the team will be investigating whether consanguinity is a risk factor.
3. The PNLC, with catalytic support from HKI, has reached another 18 provinces with primary eye care. In the 31 out of 60 provinces now covered by primary eye care and ophthalmological services, 82% of cases of eye disease is being treated at the community level, while 18% is referred. This achievement reduces the burden on secondary and tertiary levels of health service and at the same time reduces the cost to the patient for travel and overnight stays.
4. In 1996, a USAID evaluator, Dr. James Sprague, recommended continued support of Project SEE, citing the effective referral system and solid management of the provision of ophthalmic services. Michael Farbman, USAID Director Morocco, also endorsed the continuation of Project SEE in Morocco.

### I. Summary of Project's Accomplishments and Weaknesses

#### A. Expansion, Adaption and Widespread Commitment:

1. In 1995, the PNLC budget included the following: Cooperation of the French Government in training and equipment for ophthalmological centers (\$278,620); MOH

contribution of \$715,000 to salaries of ophthalmologists, and \$430,000 to salaries of nurses trained in primary eye care. Maintenance of ophthalmic equipment was \$417,000. In 1992, HKI was able to garner a three-year grant of \$400,000 from the Saudi Eye Foundation for equipment and training for a cataract "Center of Excellence" in the south of Morocco. Gifts-in-kind of medical supplies and equipment for the period total \$573,1096 (See Appendix 1).

2. Under Project SEE, a total of 719 professionals (205 doctors and 514 nurses), have been trained in primary eye care and equipped to treat common eye problems at the rural and suburban level. These individuals are stationed in 20 provinces, which heretofore did not have a system of primary eye care and referral to secondary and tertiary centers. These individuals were trained at a cost of \$74 per trainee. Their health center are equipped with a PEC kit at a cost of \$47 each.

3. Data on children with congenital cataract were followed in Rabat and Casablanca. Medical records on 152 children with congenital cataract are being analyzed with respect to: onset of blindness, etiology of blindness, pre- and post-operative visual acuity, length of followup, type of surgery and quality of surgery. In 1995, a total of 228 children with congenital cataract were operated. About 60% of these children will benefit from surgical intervention. In order to establish optimum selection, surgical and followup criteria, a tailor-made system using EPIINFO has been developed and will be put in place so that data on all children can be entered.

4. The incidence of cataract blindness is an estimated 28,000 new cases per year. Between 1993-1996, the total number of surgeries performed was 54,243. These surgeries were performed regularly at secondary hospitals and in outreach campaigns scheduled on weekends. In the life of Project SEE, a tripling of cataract surgery has been accomplished. At the current rate of surgeries (18,276 per year), the PNLC will soon cover the incident cases and any surgeries above that will allow a reduction in the backlog.

Table 2. Morocco Project SEE

Total Cataract Surgeries Performed and In Campaigns 1993-1996

Year	Total cataract surgeries performed	Surgeries performed in campaigns
1993	6,172	
1994	14,492	1,422
1995	15,303	2,767
1996	18,276	1,324

5. An historic public/private partnership has emerged through the efforts of HKI and the Edna McConnell Clark Foundation to lay the foundation for global trachoma control policy. Using the Morocco Trachoma Control services (training trichiasis surgeons), HKI/USAID Project SEE and the PNLC's finely-tuned prevention of blindness program, a new drug, azithromycin (Zithromax™), is being studied in endemic areas.

## **B. Weaknesses**

1. Problems exist in terms of cooperation between the PNLC and the two children's surgical centers in Rabat and Casablanca. The Rabat center is overwhelmed with cases referred from the north. In Rabat, children are not a priority for operating room time at the Centre Hospitalier Universitaire (CHU). Adults have three days operating room time and children one day. Efforts to equip a separate operating room for children at a cost of over \$100,000 failed. Decentralizing pediatric surgery to regional centers in Marrakesh, Agadir, Tangiers and Fez is being considered.

2. Entry of the data on childhood blindness has taken longer than anticipated. Because the objectives of analysis are not compatible with the WHO standard form, medical records of 150 children were entered and a refined system of entering data has been devised.

3. One provincial hospital in Chefchaouen has not been able to keep up with the quantity of cataract surgery. The Chinese expatriate doctor can only do intracapsular surgery, therefore an operating microscope has not been put in place by the MOH. The Moroccan doctor assigned to this remote region left due to lack of adequate equipment (microscope).

4. Cataract campaigns require the displacement of ophthalmologists over the weekends to secondary hospitals and interrupt the rhythm of the more central hospitals and causing "burn-out" of personnel due to the intensity of this activity. The campaign strategy, while effective for the backlog, is being replaced by regular referrals to regional centers and a better rhythm of surgery at main hospitals.

## **II. Description of Activities**

A. Training of doctors and nurses reached national proportions (See Table 3 next page).

B. Childhood Blindness -- A total of 55 children were operated in the CHU in Rabat and 94 at the Hopital 20 Aôut in Casablanca. At least three months followup was recorded.

C. Procurement -- Procurement of goods is well-established and regular. For example, foreign body kits cost approximately \$25; a magnifying loupe costs about \$23 (See Appendix 1).

D. Service Delivery -- With regard to primary eye care, Table 4 (next page) shows data recorded in health stations and reported at both the provincial and national level. Note: More primary eye care workers are treating cases at the primary level and thus fewer cases have to be referred to the provincial level for secondary and tertiary care.

Table 3. Morocco Project SEE

Doctors and Nurses Trained in Primary Eye Care 1993-1996

Years	Provinces	Doctors	Nurses	Total
1993	Chefchaouen	10	36	46
	Al Hoceima	07	34	41
	Sidi Kacem	10	20	30
1994	Fez Z.M.Y.	13	17	30
	Fez Medina	14	15	29
	Fez Jdid D.D	11	10	21
	Figuig	06	21	27
	Nador	20	41	61
	Taounate	16	40	56
1995	Oujda Angad	04	17	21
	Jerada	04	06	10
	Berkane Taourirte	04	14	18
	Azilal	14	32	46
	Taza	24	26	50
1996	Tiznit	06	38	44
	Assa Zag	03	20	23
	Guelmim	09	31	40
	Tan	03	13	16
	El Kelaa	09	38	47
	Beni Melal	18	45	63
Total	18 provinces	205	514	719

Table 4. Morocco Project SEE

Treatment and Referral by PEC Workers 1994-1996

Year	# of provinces with primary eye care workers	# Treated by primary eye care workers	# Referred
1994	14 Provinces	169,630	60,674
1995	24 Provinces	536,180	83,971
Jan-June 1996	26 Provinces	110,520	9,949

### **III. Strategy/Approach**

A. Training involves general medical doctors and one nurse from each health center and dispensary. Additionally, doctors and paramedicals and emergency staff from hospitals are involved. The "*medecin chefs*" of the medical service and "*animateurs*" in primary eye care conduct the training. Primary eye care trainings are also carried out in the "*foyers de femmes*"-- women's advancement groups which do embroidery and teach basic nutrition and family management.

B. HKI pays per diem for training and the MOH contributes room and board.

C. In each dispensary and health center, records are kept and reported every three months. The records shows: name, sex age, complete address, diagnosis, treatment, or in the case of a referral, where referred and to whom. At the end of each trimester, the "*medecin chef*" completes a report on the data collected from the records and sends it to the provincial officer who then forwards it to the PNLC Chief. The following primary eye care data are analyzed each three months: # of consultations; treatment and medicine administered; # of minor surgeries (extraction of superficial foreign body); number of patients referred; and number and percentages of school children who wear eye glasses.

D. Childhood Blindness Centers have been established in Rabat and Morocco. Eye surgeons were trained in the HKI protocol on Childhood Blindness in each of the Secondary Centers in Tangiers, Marrakesh, Agadir and Fez.

### **IV. The Future: Strengthening, Completion and Celebration of a National Eye Care System**

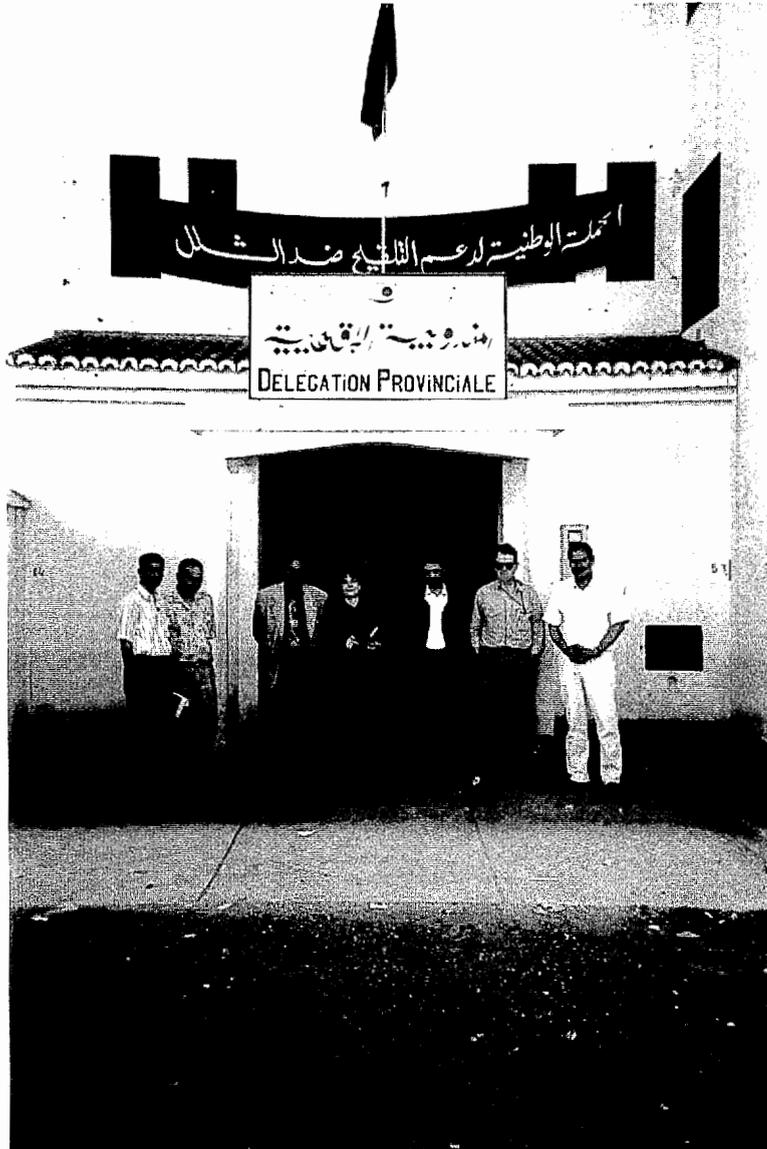
By the Year 2,000 in Morocco, the PNLC will take the lead with HKI as an institutional advisor. The aim of Project SEE II is to reduce the prevalence of blindness by 50%.

HKI and the PNLC will achieve this by extending access to eye care to the remaining 16 provinces in the country, whose predominantly rural population of 8.1 million people represents approximately 31% of the total population. Overall, the key intervention to extending eye care services to 16 additional provinces will be the training and equipping of 250 GPs and 545 nurses in the diagnosis, early screening, preventive care, surgery and referral of eye disease to the secondary level.

In order to decentralize congenital cataract surgery, ophthalmologists at secondary centers in Agadir, Fez, Marrakesh and Tangiers will be retrained and equipped with medical supplies to do surgery.

Fewer than 30% of school children who need glasses in Morocco get them. A demonstration project called ChildSight<sup>SM</sup> will enable children to get a free pair of glasses. ChildSight<sup>SM</sup> will enlist the cooperation of the Ministries of Education and Health and the Moroccan Society of Opticians. It will be introduced to Morocco in January of 1997. Elements of ChildSight<sup>SM</sup> are simple vision screening, an autorefraction and a pair of glasses assembled on school premises.

# MOROCCO



In Morocco over 719 doctors and nurses trained in primary eye care are supervised by provincial administrations such as this one in Chefchaouen

## MOROCCO



Dr. James Sprague, pediatric ophthalmologist, with Moroccan doctors looking on, examine an indirect ophthalmoscope critical in the evaluation of childhood blindness cases



Professor Amina Berraho-Hamani examines child (with mother looking on) at Rabat Centre Hospitalier Universitaire

### III. THE PHILIPPINES

#### BACKGROUND

At the time when Project SEE was conceptualized, the population of the Philippines was estimated at 65 million and the prevalence of blindness, through a nationwide survey conducted in 1987, was presumed to be the same at 1.07%. The number of Filipinos who were bilaterally blind was almost 700,000 and most of the blindness (87%) was due to cataract. The estimated number of ophthalmologists in the country was 500, most of them practicing in urban centers, especially Metro Manila. Twelve of the 76 provinces of the country had full-time ophthalmologists who have been trained in the Modified Residency Training Program (MRTP) initiated by HKI. Almost 30 provinces did not have a government ophthalmologist nor a practicing ophthalmologist.

A Second National Survey on Blindness was undertaken in 1995. It shows that the prevalence of blindness has decreased 35% in eight years, from 1.07% in 1987 to 0.70% in 1995. Since the population has increased by nine million in that same period, the number of blind Filipinos is 400,000--77% of whom are adults suffering from cataract.

Because of the nationwide decentralization process in the Philippines, HKI and other NGOs had to adapt their strategies for sustainability. The Government has established Local Government Units (LGUs) as the basic political unit for planning. The primary level of political organization is the "*barangay*," or village, where village health workers (VHWs) are stationed.

#### MAJOR RESULTS OVER THE PAST THREE YEARS

*"...Blindness transcends family and social relationships and its control should be a continuing concern of government and non-government organizations."* November 1996

Dr. Salvador R. Salceda, Director

The Institute of Ophthalmology, Manila, the Philippines

1. The Modified Residency Training Program (MRTP) has been historic in deploying ophthalmologists and equipping them to be stationed in underserved provinces. Accredited by the Philippines Board of Ophthalmology, MRTP is a three-year residency that trains rural doctors to become ophthalmologists. A six-year contract, signed by the resident, ensures that graduates will return to a rural area to serve the population, often living on islands. Thirteen trainees will graduate from this distance education program which is endorsed by the University of Manila and the Institute of Ophthalmology. As a training program, the MRTP evolved as one, if not the only one, of the best programs to provide secondary eye care in the rural areas on a regular, permanent basis.

2. The Department of Health (DOH) approved and launched the Prevention of Blindness Program (PBP) in recognition of blindness as a public health problem. HKI has become an institutional advisor to the PBP and its four programs (Cataract, Primary Eye Care, Vitamin A Deficiency Prevention and Control and Equipping of Hospitals). Responsibility for staffing and equipping of provincial hospitals rests in the hands of LGUs and their Governors.

3. HKI helped to establish Task Forces in Regions V (Bicol) and VI (Panay) which collaborate on MRTP and PEC activities. Members include MRTP graduates and local representatives of the DOH, Education, Social Welfare and Development, and Information Agency, LGU and NGOs. The Task Forces have proven to be very effective venues for support and coordination of ophthalmic services.

4. The Pediatric Ophthalmology Unit (POU) at the Philippines General Hospital (PGH) is the clinical and surgical center for parents who come from the many islands of the Philippines. Children with congenital cataract are operated and followed up at PGH for at least four months and in the provinces afterwards. HKI equipped the POU with special pediatric diagnostic and surgical equipment and provided technical assistance through the visit of Dr. Richard Robb, a pediatric ophthalmologist and professor from Children's Hospital and Harvard University in Boston, Massachusetts.

## **I. Summary of Project's Accomplishments and Weaknesses**

### **A. Accomplishments**

#### **1. Increased mobilization of human resources**

MRTP -- Eleven ophthalmologist residents will graduate in December of 1996 and two in December of 1998 to return to ophthalmology practice in rural areas.

Childhood Blindness -- At least four pediatric ophthalmologists from POU are working with the *Forms and Guidelines* for Childhood Cataract Surgery (See specific section in Appendix 6). Drs. Sison and Cubillan have demonstrated particular interest in the pediatric field. Ophthalmology residents rotate through this service.

#### **2. Increased mobilization of financial and material resources**

Support of Cataract Surgery -- Despite the non-renewal of funding by HKI/USAID for this activity, local officials in Region V and VI where MRTPs are stationed have pledged to continue cataract detection campaigns. During the period of Project SEE, approximately 3,200 surgeries were undertaken through cataract campaigns. IEC materials such as flyers, cataract cards, comics and billboards were developed and used to raise awareness about cataract surgery.

### **B. Weaknesses**

1. MRTP -- While an initial 15 trainees were accepted and started their training in January 1994, within one year, three dropped out of the program for a variety of reasons. They were eventually joined by one more. These events led to the revision of acceptance procedures in favor of only newly-graduated doctors in the age range of 25 to 49.

2. Support of Cataract Surgery -- A lack of awareness on the part of people in the community about the role of PEC workers in detecting cataract led to the development of a social marketing scheme. The strategy was effective, though not sustainable due to the high cost.

3. Childhood Blindness -- Because the POU is new, future expansion will need to focus on these weaknesses: lack of attention to detail and incompleteness in filling out the childhood blindness forms, and patient's records which are lost or misplaced. Encouraging parents to have their children followed for at least six months to ensure optimal visual rehabilitation is a continuing struggle.

4. The Task Forces in Region V and VI are very effective mechanisms for instigating utilization of ophthalmic services. HKI was at the forefront of all these activities, i.e., the prime mover for initiatives to be implemented. Verbal commitments remain and it is up to those Task Forces to ensure the realization of a commitment to eye care.

## **II. Description of Activities**

A. MRTP trainees were recruited and trained. A roster of 20 consulting ophthalmologists made about 45 visits per year. Six regional coordinators were identified:

1. Region V -- Dr. Ed Sarmiento
2. Region VI -- Dr. Mario Moscoso
3. Region VIII -- Dr. Lemuel Gatchalian
4. Region X -- Dr. Rustan Hautes
5. Region IX -- Dr. Orlando Paber
6. PGH -- Dr. Teresita Castillo

B. With consultation from Dr. Robb and Dr. Pizzarello, Medical Director, equipment was purchased. Teller acuity cards were used in case selection of children: a papoose board immobilized infants and children; and a trial lens set and a Perkins tonometer were sent to the PGH Childhood Surgery Center.

HKI hired a research assistant to monitor forms and determine the financial need of children needing cataract surgery and followup. A total of 1,594 children were screened. Eighty-nine cases were followed for at least four months at PGH and subsequently in rural areas.

Table 5. Project SEE The Philippines

Statistical Summary of Childhood Blindness Output 1993-1996

Year	# of children screened	# of children identified as having cataract	# of children operated	# followed for 6 months
Oct 1993-Sept '94	-	-	-	
Oct 1994-Sept '95	528	42	34	8
Oct 1995-Sept '96	1,066	99	55	1
Total	1,594	141	89	9

C. Contracts with the DOH and Governors were signed to ensure that ophthalmic equipment, instruments and supplies would be procured. Frequent dialogue sessions were necessary to reinforce their role in the prevention of blindness.

**III. Description of Methods of Work Used**

A. For the MRTPs, a good curriculum, committed consultant trainers and consistent evaluation of trainees is established. Six coordinators for each region were utilized. Five government hospitals were used as training sites:

- Bicol Regional Hospital in Naga City, Camarines Sur
- Western Visayas Medical Center in Iloilo City
- Eastern Visayas Medical Center in Tacloban City
- Northern Mindanao Regional and Training Hospital in Cagayan de Oro
- Zamboanga Medical Center in Zamboanga City

Evaluation of residents' performance is done at the end of each year. After the residents graduate, they are eligible to take the Philippine Board of Ophthalmology examination.

B. HKI contracted a consultant in pediatric ophthalmology, Dr. Richard Robb, CBTAG member, in February 1995. Dr. Robb addressed 100 members of the Philippines Academy of Ophthalmology and shared aspects of the American pediatric ophthalmological experience with the Filipino ophthalmologists. It is most difficult to ensure adequate post-operative followup and provision of aphakic glasses. Because pediatric ophthalmological practice in the Philippines is in its early stages, a lively discussion took place on the merits of intraocular lens implantation, maintenance of the integrity of the posterior capsule and use of a vitrector.

**IV. Maintain and support MRTP, encourage effort of VHWs, doctors and ophthalmologists to detect and treat cataract among adults and children**

While it has not been possible for USAID to support a continuation of Project SEE, it is clear that the Modified Residency Training Program is already being supported by the Christoffel Blindenmission. Funding for trainees in the southern region and equipment for their base hospitals has been maintained. HKI will continue to provide gifts-in-kind as possible.

Similarly, the Childhood Blindness Initiative, which has demonstrated preliminary success, will be maintained by the dedicated doctors at PGH. HKI intends to finalize the analysis of the 89 cases operated and make written recommendations to the Pediatric Ophthalmology Unit.

Due to the efforts of Dra. Eva Santos and her staff, among others, the PBP has gained wide acceptance and recognition by the Philippines Academy of Ophthalmology and the Institute of Ophthalmology. Reorienting Manila-based ophthalmologists to the needs of the urban and rural poor and blind has been challenging. Success has been achieved as some Manila ophthalmologists are now conducting their own cataract surgical missions. The cataract backlog remains a high priority. The sustainable solution is support of MRTPs and increasing the credibility of VHWs in cataract detection.

# PHILIPPINES



Staff and consultants for the Modified Residency Training Program (MRTP)  
in ophthalmology in Iloilo Province in the Philippines

## PHILIPPINES

With funds from Het Schild (Holland), this slit lamp was purchased for a MRTP Base Hospital in Zambales.



Dr. Robb, pediatric ophthalmologist, using an indirect ophthalmoscope examines child at Philippines General Hospital

## IV. TANZANIA

### BACKGROUND

For the past three years, Project SEE has been geared towards a commitment of fulfilling a tough mission of saving the sight and providing eye care services with a prime aim of alleviating the suffering of many people in the central part of Tanzania. HKI was mainly working in Dodoma Region before the inception of Project SEE. As part of the expansion program, Iringa and Singida regions were included in the grant. Helen Keller International, the Ministry of Health, National Prevention of Blindness Committee, Central Eye Health Foundation (CEHEFO) and other groups have collaborated to integrate eye care activities into the primary health care system (See Appendix 7). Cataract screening, referral and surgical services have been provided throughout the four districts of the Dodoma Region as well as Dodoma Town.

For Project SEE in Tanzania to be a success in controlling eye diseases and blindness, HKI staff always felt the need to not only improve our therapy and rehabilitation facilities, but also to reinforce prevention as the most important aspect of health policy. We have seen more Village Health Workers being trained on health care management than during any time of the program in this part of the country. Lack of education, poor nutrition, and inadequate preventive eye care are very closely related. HKI staff have therefore trained everyone we could including general doctors, teachers, Medical Assistants, Rural Medical Aids, integrated eye nurses and other health providers in order to disseminate the knowledge with a prime aim of preventing blindness.

### MAJOR RESULTS OVER THE PAST THREE YEARS

1. There has been a dramatic increase in referrals to the secondary level (i.e., the Kongwa Eye Clinic) as a result of:
  - increased screening by VHWs & others (**demand**);
  - increased ability to handle the clients due to improved **accessibility** of services -- from additional equipment, additional personnel and additional sites;
  - and continued **satisfaction** with the services provided.
2. Many schools around Kongwa have active face washing programs. In 1993, HKI examined all school children (1,139) in standards 1-3 in 10 primary schools for signs of trachoma. HKI can then use these baseline data in followup studies to determine to what extent this intervention is affecting the prevalence of active trachoma. Students and teachers are becoming used to incorporating this brief activity into the regular routine of their school day.
3. Expansion of eye services in central Tanzania has been slow, yet this rate has allowed the system to grow steadily and to readjust as necessary at each step. There have been no major influxes of resources at any one level (primary or secondary) which have thrown the system off.
4. Expansion of eye services may be slow and results relative. Compared to other parts of Tanzania with similar conditions, the systems established and achievements reported by Project SEE in central Tanzania are pathbreaking. Health professionals from other parts of Tanzania visit Kongwa to study their systems and the National Prevention of Blindness Committee is reviewing Kongwa's eye care protocol, curriculum and materials as true models for other areas.

## **I. Summary of Project's Accomplishments and Weaknesses**

### **A. Accomplishments**

1. We have managed to persuade village governments to more fully recognize their village health workers. VHWs have offices in each village participate regularly in Project SEE.
2. Cataract patients are now being operated at Kongwa instead of transporting them to Mpwapwa, 28 km away from Kongwa.
3. Teachers are actively involved in trachoma prevention by actively involving children in face washing on a daily basis.
4. Village leaders feel that the eye program belongs to them and this is an important step in the process of sustainability.
5. Most village health workers are able to come to Kongwa for "on-the-job" training sessions on Mondays and Thursdays, the two "clinic days".
6. Each cataract or trichiasis patient is followed up before and after surgery by both village health workers and eye workers.
7. We have a superb referral system that allows eye patients to get prompt attention without wasting a lot of their money and their time.
8. Teaching sessions can now happen at our centre (i.e., the new training facility of CEHEFO in Kongwa), so we are able to work longer and hopefully more efficiently.
9. Each cataract operating center has its own set of instruments compared to the old days when only one set had to circulate.
10. The National Prevention of Blindness Committee and the Advanced Diploma Ophthalmic Nurse Tutors have been consulting our program to see how this "Kongwa Eye Model" can best be replicated to other parts of the country.
11. HKI has leveraged Project SEE's programmatic and administrative infrastructure to obtain a grant from the McKnight Foundation for a savings and credit project in the Kongwa district. This new project will complement the trachoma control activities of Project SEE.

## **B. Weaknesses**

1. Village health workers have not been getting enough incentives from their respective villages. This demoralizes them.
2. 5 out of 12 (42%) bicycles given to village health workers have not been put into proper work of serving the needy.
3. Most staff at the Rural Health Center in Kongwa are not interested in eye work and therefore it becomes difficult for them to examine and treat eye patients during our absence - say at night or during public holidays.
4. More seminars for Medical Assistants and Rural Medical Aids would make them more capable of handling eye patients.
5. Expansion to Singida and Iringa has been slow.
6. Sometimes we have not been able to teach village health workers on clinic days due to heavy workload.
7. Some program villages are slacking off because they are not regularly supervised due to other commitments.
8. Little work on "community support for trachoma control" has been done in Singida and Iringa regions.
9. We receive irregular reports from village health workers.

## **II. Description of Activities**

In Tanzania, HKI has undertaken the following activities as part of Project SEE:

**A. Training Needs Assessment** - The questions asked focus on identifying the current skills of the trainees (i.e., village health workers, ophthalmic nurses, integrated eye workers and teachers) and the type of training to be offered (which materials, methods, approaches, follow-up? how different from previous training efforts? potential for integration into other sectors).

**B. Kongwa Eye Clinic and Cataract Services** - The Kongwa Eye Clinic was given more weight in terms of increasing human resources to cater for the influx of patients being referred by VHWs, Medical Assistants and teachers. One Medical Assistant, who has undergone basic eye training, has joined hands with the current eye staff. Screening for cataracts is usually done in villages by trained local health staff and clinic staff; cataract operations continue at the clinic. More cataract sets were procured for Lumuma, Kongwa, Kondoa and Mpwapwa hospitals and Kwamtoro as an eye camp in order to improve the surgical services.

### C. Training Ophthalmic Nurses and Integrated Eye Workers

1. Ophthalmic nurses continue to be trained in proper methods of setting up outreach clinics, recording and reporting, and on concepts and elements of primary health care. The Bilamellar Tarsal Rotation Procedure for trichiasis surgery, as recommended by the World Health Organization, is now more popular among eye workers in more than 10 regions of Tanzania. Ophthalmic Nurse Tutors from one of the consultant hospitals spent a couple of days with HKI with an aim of conceptualizing on the provision of eye care using the "Kongwa model";

2. Teachers and integrated eye workers had sessions on trachoma grading, face washing and environmental sanitation. Many schools around Kongwa have active face washing programs. In 1993, HKI examined all school children (1,139) in standards 1-3 in 10 primary schools for signs of trachoma. HKI can then use these baseline data in followup studies to determine to what extent this intervention is affecting the prevalence of active trachoma. Students and teachers are becoming used to incorporating this brief activity into the regular routine of their school day. This program is made possible by the installation of piped water in the schools and the dedicated commitment of the teachers who assist with the face washing, either before or after classes, every day.

D. Community Eye Health Education -- Continued radio broadcasts by HKI Tanzania staff over the last three years have informed more people in central Tanzania that simple improvements in hygiene can indeed result in spontaneous disappearance of trachoma. In addition, patients with trichiasis are now more aware that they can have their lid surgery performed at no cost, right in their own village, and that this can prevent them from becoming blind. As a result of this, we have noted a high compliance rate. Finally, the Ministry of Health is very involved in the testing and distribution of training materials which are introduced by HKI Tanzania, either developed on their own or others (e.g., WHO).

E. Community-based Rehabilitation of Blind Clients -- Activities over the grant period include: obtaining profiles on all blind persons living in 15 participating villages and identifying those who need cataract or glaucoma surgery and/or motivation for self and family; mobility training (walking by oneself with a long cane), orientation and activities of daily living (e.g., self care skills) and vocational skills (agricultural activities) and expansion to one more village named Hogoro. In addition, a co-op of blind clients in one village (Ibwaga) has sold groundnuts and cassava, resulting in a bank account of Tsh. 210,000 (\$375) at the National Bank of Commerce.

F. Procurement -- Procurement of goods identified in the assessment resulted in each cataract operating center having a new cataract set plus accessories. Stocks of tetracycline ointment for villages and all eye clinics have been sufficient (See Appendix 1).

## G. Service Delivery

1. We increased the number of paramedics by training more VHWs, nurses, teachers and village health committee members so that more people can be screened at different levels.
2. We have established a streamlined referral system that enables any person from any village to be referred to us without much of a fuss. The flow of patients from villages to the Kongwa Eye Clinic to the Regional Eye Unit in Dodoma has been well established that no eye patient should suffer.
3. Development and adoption of a national plan for integrated eye care was initiated by our office and submitted to the National Prevention of Blindness Committee in 1995. The document is currently being scrutinized by the Ministry of Health for approval and circulation throughout the country.
4. Meaningful points of integration have already been identified through a multi-sectoral approach in dealing with eye problems. We are closely working with the water department, community development, forest extension services, soil conservation programs and with the Maternal and Child Health services. As a result, we have seen more villages getting services through support by departments other than ours, e.g, HKI provided transportation during the recent polio eradication campaign which vaccinated more than 2,500 children in the central region.
5. Services for low-vision have started on a small scale in the central Tanzania. During a sensitization conference conducted by the Ministry of Education at Morogoro, Dr. Mmbaga, the principal speaker, presented guidelines for replicating the services to other regions.
6. Cost recovery systems are now the nationwide policy in Tanzania, and operational at Regional and District Hospitals only. In Kongwa, cost-recovery for cataract surgery and eye glasses has long been in place. Eye patients are asked to pay about Tsh 1,500 (\$2.67) for registration and for glasses - hence the importance of low-cost spectacles.
7. Demand and access to services at the village level has increased tremendously over the last two years following new approaches during Project SEE where villagers are given more responsibilities and ownership by participating during in program planning, implementation and evaluation.
8. Support services were continued. The Health Center at Kongwa, where the eye clinic is located, has had transport problems for many years. The MCH team has long relied on HKI's vehicle resources to reduce the distance to be covered by walking. This support has always been appreciated by both the Rural Health Center staff and government officials.

### **III. Strategy/Approach**

The strategies used below are designed to help increase the accessibility of eye care services to the clientele, their confidence in them and thus their ultimate use of them.

- A. Letters are sent out by our driver to villages specifying the type of activity to be done, when and for how long. Villages are supposed to make a response on the same day.
- B. Driving to villages on agreed-upon dates for eye clinics and/or meetings adhered to.
- C. Village health workers do the screening for cataract, trachoma and trichiasis and send us names of patients to be attended on a particular day.
- D. Eye clinics at villages are organized by village health workers (VHWs) and HKI's team works together with them on specific days.
- E. Cataract patients eligible for surgery are screened at villages and given dates for surgery. We sometimes provide transport for them and sometimes relatives bring them to the cataract operating center(s).
- F. All trichiasis patients are operated on a "community-based" level unless there are other complications, e.g., hypertension, diabetes, young age.
- G. All blind clients are followed at the village where they are. Adults are not encouraged to seek specialized training which would require their leaving their own family.
- H. Family members of blind clients are involved in the training process at the village level.
- I. All patients with intractable eye conditions found in villages are advised how best to deal with their problem. We sometimes bring back patients to be admitted at the Rural Health Center for special attention.
- J. Village health workers have their own "clinic days" at their respective villages. They treat minor eye problems and refer difficult cases to us.

### **IV. Unfinished Work, Program Continuation and Expansion**

A. **Expansion to Singida and Iringa regions** -- As stated earlier, the set up of the Singida primary eye care program has been initiated. Village leaders and the Regional Administration have shown a lot of interest. What remains now is to further motivate eye care providers so that more work can be done. Anecdotal surveys were done during May of 1995 followed by training of the regional eye team at Singida.

B. We need to educate "**community engagement in the control of trachoma**" at Singida, and even more for Iringa where more anecdotal surveys need to be done to facilitate this. If this happens, then there will be more sustainability. The slow pace observed in both regions is attributed to shortage of manpower. Plans are underway to consolidate this work in the two regions. We recommend two visits to each region before they can gain confidence.

C. As **tree seedlings** are becoming more scarce, we have recommended to village leaders in each of the regular recipient villages to make sure that they get their own tree nurseries in order to facilitate the exercise of tree planting which is usually done during the rainy season.

D. We have not yet expanded the **community-based rehabilitation program** to Chamae (one of our regular program villages) because we thought we needed more time to consolidate at Ibwaga before moving to the next village. We have found that this is giving us more lessons before we move on. It has taken us three years to make the Ibwaga group active and mobile. We hope to be able to expand to Hogoro village during next year.

E. Some **village health workers** are not paid their monthly dues by their respective villages -- this leaves them demoralized and unable to attend the Kongwa "on-the-job-training" sessions. Even though we have tried to hold regular meetings with Village Health Committees, but we are getting very little support on this issue.

F. **Water** is scarce in many of the program villages. During the period of Project SEE, we have stressed to villagers about how important it is for them to have small dams - so that they can have even surface water for domestic purposes. Most of the villages have not been able to afford to hire tractors and other drilling devices from various institutions.

G. A **small ward capacity** for the Kongwa Rural Health Center is hindering our efforts to book and operate more cataract and glaucoma patients.

# TANZANIA



Rehabilitation Programs allow blind individuals to  
achieve independence and grow vegetables  
to sell in their village in Tanzania

## V. HEADQUARTERS

### Program Start Up Meeting

HKI headquarters began Project SEE technical assistance by assembling headquarters and field staff in an orientation meeting in Agadir, Morocco (See Appendix 8). All Project SEE countries were able to participate as well as headquarters staff. The group developed goals and objectives for Project SEE and established work plans and a uniform reporting form for monitoring monthly and quarterly outputs.

### Technical Advisory Groups

During regular meetings, HKI's Medical Advisory group considered important technical issues such as the Mexico blindness survey and the establishment of Childhood Blindness Centers. The cost of congenital cataract surgery was deliberated by HKI's Medical Director and Chairman of HKI's Program Committee. The Childhood Blindness Technical Advisory Group was formed in early 1994, and began by developing *Forms and Guidelines* (Appendix 6) for congenital cataract surgery in three countries: Mexico, Morocco and the Philippines. This protocol was shared with field offices and as a result, Country Representatives in the Philippines and Morocco were able to form working partnerships with key ophthalmologists who already had a pediatric focus. Often, the TAG was able to refocus staff on the specific goals and recommendations regarding congenital cataract surgery.

### Training

The Director of Training and Community Education assisted the Project SEE Director to begin activities in Mexico, a new country for HKI. During the period 1993-1994, the Training Director provided regular training advice to Mexico and the Philippines. In Morocco, a local training team and the program management is ably handled by local counterparts in the MOH. In Tanzania, HKI's Public Health and Trachoma specialist developed a WHO manual entitled *Achieving Community Support for Trachoma Control: A guide for district health work*, which used Tanzania as its laboratory for learning about trachoma. HKI summarized and published *Basic Eye Care: Training Activities for Community Health Workers* (See Appendix 9). This manual is designed for trainers who will teach community health workers and medical assistants to provide eye care services at the community level.

### Staffing

HKI Headquarters staff meets each week to discuss field developments such as the results of surveys, cataract campaigns, primary eye care training strategies and overall results of field projects. HKI's Medical Director, a practicing ophthalmologist and public health physician, provides invaluable guidance to staff who are not ophthalmologists regarding surgical technique, appropriate technology and public health ophthalmology. Despite changes in Project SEE's Director and Monitoring and Evaluation Specialist over the grant period, data are consistently collected on a monthly and quarterly basis. Yearly trips are made to the field by the Medical Director, Project SEE Director, Public Health Advisor and Training Director, as well as consultants.

### Monitoring and Evaluation

Two final evaluations were done in Mexico and Morocco by Drs. James Sprague and Maynard Wheeler, respectively, both pediatric specialists. Technical assistance in the Philippines was given by Dr. Richard Robb of the CBTAG. Their recommendations are include in the "*Chronology for Childhood Blindness Initiative*" (See next page).

### Funding

Significant results have been achieved by HKI's ability to leverage private funding through the Matching Grant. Funds from corporate entities such as Chase Private Banking, Reuters, Pfizer and Procter and Gamble have built upon activities such as ChildSight<sup>SM</sup> which are now part of Project SEE II. Foundation support was obtained from Het Schild (Holland) and the Edna McConnell Clark Foundation, which has funded the Trachoma Task Force. In Project SEE I, HKI surpassed its matching requirement (See Section VI Financial Report).

HKI's local partners include Lion's and Rotary Clubs in Mexico, Morocco and the Philippines which support equipment and supply purchases.

CHRONOLOGY FOR EVENTS IN THE CHILDHOOD BLINDNESS INITIATIVE  
PROJECT SEE: OCTOBER 1993-SEPTEMBER 1996

- March 1994, Childhood Blindness Technical Advisory Group (CBTAG) establishes Forms and Guidelines on childhood cataract surgery, a protocol for case selection, surgical methods and followup
- January 1995, 11 Ophthalmologists trained in Forms and Guidelines in Morocco; Surgical Centers established in Rabat and Casablanca
- February 1995, Dr. Richard Robb, CBTAG member visits Childhood Surgery Center in Manila, the Philippines and addresses 100 members of Philippines Academy of Ophthalmology
- April 1995, Two revisions made in CBTAG guidelines, reflecting use/non-use of vitrectomy in the field and the alternative of capsulorhexus
- May 1995, USAID consultant, Dr. James Sprague, evaluates Childhood Surgery Centers in Rabat, Casablanca and Tangier. Recommends the decentralization of referrals and post-operative followup
- September 1995, USAID consultant, Dr. Maynard Wheeler, evaluates the Childhood Surgery Center established in Mexico City
- August 1995, Childhood Surgery Centers in Mexico, Morocco and the Philippines operating using Forms and Guidelines
- October 1995, CBTAG reconvenes and concludes, "You (HKI) have taken children who might have been left in a dark room and provided them with a clear visual axis."
- March 1996, Project SEE II is approved as a Matching Grant with USAID funding from Childhood Blindness
- September 1996, Data from a total of 279 cases (149 Morocco, 41 Mexico, and 89 in the Philippines) are analyzed
- October 1996, HKI Medical Director, Dr. Louis Pizzarello presents, data from Childhood Blindness Initiative to several hundred ophthalmologists at the American Academy of Ophthalmology's International Group
- December 1996, WHO Childhood Blindness Guidelines are revised for use with EPI INFO in order to be more "user-friendly" in the field and to address common concerns regarding case selection, variations in technology and importance of followup and parental involvement

**Project S.E.E.**  
**Cooperative Agreement #**  
**FAO-0518-A-00-3077-00**  
**Federal Share of Funds**

	<b>Approved Budget</b>	<b>HKI/FY94 10/93-6/94</b>	<b>HKI/FY95 7/94-6/95</b>	<b>HKI/FY96 7/95-6/96</b>	<b>HKI/FY97* 7/96-9/96</b>	<b>Total Expenses</b>
Personnel	965,700	158,419	395,947	481,706	120,427	1,156,499
Training	249,590	31,907	37,012	74,299	11,575	154,793
Other Direct/Project Costs	508,754	142,197	169,069	186,502	26,625	524,393
Travel	249,640	29,814	41,228	20,390	10,307	101,739
<b>Subtotal, Direct Costs</b>	<b>1,973,684</b>	<b>362,337</b>	<b>643,256</b>	<b>762,897</b>	<b>168,934</b>	<b>1,937,424</b>
<b>Indirect Costs</b>	<b>426,316</b>	<b>94,750</b>	<b>167,247</b>	<b>164,023</b>	<b>36,321</b>	<b>462,341</b>
<b>Total</b>	<b>2,400,000</b>	<b>457,087</b>	<b>810,503</b>	<b>926,920</b>	<b>205,254</b>	<b>2,399,765</b>

\*Note:  
FY97 not yet audited.

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**Matching Funds, Project SEE**  
**October 1, 1993 - September 30, 1996**

<b>DIRECT COSTS</b>	<b>Yr1</b>	<b>Yr2</b>	<b>Yr3</b>	<b>Total</b>
<b>Salaries:</b>				
Project Director	0	0	21,807	
Trachoma Director/EyeCare Advisor	36,701	38,536	56,723	
Monitoring & Evaluation Specialist	0	20,000	20,000	
Medical Director	21,600	22,680	23,814	
Field Operations Assistant	15,900	16,200	16,500	
Administrative Assistant	15,000	15,250	15,500	
Fringe @ 25%	22,300	28,167	38,586	
<b>Sub Total Sals/Fringe</b>	<b>111,501</b>	<b>140,833</b>	<b>192,930</b>	<b>445,264</b>
<b>Other Direct Costs:</b>				
Occupancy	17,988	18,887	19,832	
Telephone/Fax	7,767	8,155	8,563	
Postage/Delivery	2,044	2,146	2,254	
Office Supplies	5,723	6,009	6,310	
Outside Business	1,635	1,717	1,803	
Equip. Maintenance	3,271	3,435	3,606	
<b>Subtotal ODCs</b>	<b>38,428</b>	<b>40,349</b>	<b>42,368</b>	<b>121,145</b>
		<b>Yr1&amp;2</b>	<b>Yr3</b>	
<b>GIK:</b>		<b>708,000</b>	<b>172,881</b>	<b>880,881</b>
<b>SUBTOTAL, DIRECT COSTS:</b>	<b>149,929</b>	<b>889,182</b>	<b>408,179</b>	<b>1,447,290</b>
<b>INDIRECT COSTS</b>	<b>39,132</b>	<b>231,187</b>	<b>87,758</b>	<b>358,077</b>
<b>TOTAL MATCHING FUNDS:</b>	<b>189,061</b>	<b>1,120,369</b>	<b>495,937</b>	<b>1,805,367</b>

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**APPENDIX 1**

**Project SEE Procurement and Donations 1993-1996**

<b>Country Item</b>	<b>Procured Value</b>	<b>Donation/ Match</b>	<b>Donor</b>
<b>MEXICO:</b>			
Computer	<b>\$2,000</b>		HKI/USAID
EPI INFO Software	<b>\$30</b>		HKI/USAID
Photocopier		\$1,000	Davies & Turner/HKI
Mimeograph Machine		\$200	Davies & Turner/HKI
Vitamin A Capsules		\$1,000	Leiner Health Products
IOLs, Timoptic, Sutures Photocopier		\$61,423	Merck/HKI Allergan, IOLAB & Ethicon
1 Set Ophthalmic Surgical Instruments with caddy tray	<b>\$1,520</b>		Segal Instruments Exports
1 Castroviejo Corn Scissors SM R	<b>\$268</b>		Katena Products Inc.
1 Castroviejo Corn Scissors SM L	<b>\$268</b>		Katena Products Inc.
1 Colibri Forceps	<b>\$835</b>		Katena Products Inc.
1 Topcom OMS 75 Operating Microscope	<b>\$7,950</b>		Veatch Ophthalmic Instruments

<b>MOROCCO:</b>	<b>Procured Value</b>	<b>Donation/Match</b>	<b>Donor</b>
2 Cataract Sets	<b>\$8,068</b>		HKI/USAID
123 Foreign Body Kits	<b>\$3,148</b>		HKI/USAID
356 Binocular Loupes	<b>\$8,244</b>		HKI/USAID
356 E-Charts		\$3,328	HKI
715 Intraocular Lenses		\$24,580	Gift of Sight, IOLAB, Allergan, Pharmacia/HKI
Vitrax/Healon (Viscoelastic)		\$125,000	Kabi Pharmacia/HKI
IOLs, Sutures, Neodecadron, Blades		\$305,400	Ethicon/HKI & Allergan/HKI, IOLAB, Alcon, Gift of Healing, Merck Sharp & Dohme, Davis & Geck
Timoptic		\$114,801	Merck/HKI
Site/TXRO Microsurgical Machine (Vitreotomy)	<b>\$21,136</b>		HKI/USAID
IOLAB Disposable 20 GA. Guillotin (12)	<b>\$1,500</b>		HKI/USAID
326 Optivisors	<b>\$7,550</b>		Wilson Ophthalmic Corp
100 La Force Golf Spuds	<b>\$2,400</b>		Wilson
150 Disposable Pen Lights	<b>\$149</b>		Wilson
3 Halogen Ophthalmoscope Bulbs	<b>\$58</b>		Wilson
5 Trichiasis Surgery Instrument Sets	<b>\$1,945</b>		Dixey Instruments Ltd.

<b>PHILIPPINES:</b>	<b>Procured Value</b>	<b>Donation/Match</b>	<b>Donor</b>
Computer	<b>\$2,500</b>		HKI/USAID
Intraocular Lenses & sutures		\$28,080	Pharmacia, Ethicon Allergan, HKI
Timoptic		\$32,645	Merck/HKI
Sutures		\$ 6,733	J & J/HKI
Miniature Flashlights		\$ 200	Dr. Virginia Turner
Handheld Slitlamp	<b>\$3,895</b>		HKI/USAID
2 Slitlamps		\$5,000	Dr. Snow/HKI
1 Indirect Ophthalmoscope with transformer kit #2		\$ 400	Dr. Snow/HKI
1 Dictaphone		\$ 500	Dr. Snow/HKI
6 Cataract sets	<b>\$2,500</b>		Het Schild
1 Volka Condensing Lens	<b>\$385</b>		HKI/USAID
Handheld Tonometer	<b>\$735</b>		HKI/USAID
Timoptic, IOLs		\$117,905	Ethicon/Merck/HKI
Cyclogyl, Atropine		\$1,953	Merck/HKI
Tolentino Vitrectomy Lens	<b>\$140</b>		HKI/USAID
Teller Acuity Cards	<b>\$912</b>		Veatch Ophthalmic Instruments
Indirect Ophthalmoscope		\$400	Dr. Snow/HKI
Papoose Board, Head Immobilizer, Trial Lens Set, Transformer, Pentax Lens Meter	<b>\$1,363</b>		Wilson

<b>TANZANIA:</b>	<b>Procured Value</b>	<b>Donation/Match</b>	<b>Donor</b>
Vehicle Spare Parts		\$2,247	Tim Evans/Harvard
1 Sharp Laptop		\$700	HKI
5 Kodak cartridges	<b>\$100</b>		HKI/USAID
1 TV Set		\$650	Edna McConnell Clark Foundation (EMCF)
1 VCR		\$550	EMCF
1 Toyota Vehicle		\$30,000	Het Schild
188 Timoptic .25%		\$11,511	Merck/HKI
Miniature Flashlights		\$200	Turner/HKI
75,000 Vitamin A		\$3,375	Leiner Products
2 - #80006 Electrolysis Machines	<b>\$70</b>		EMCF/HKI
5,000 Tubes of Tetracycline	<b>\$1,859</b>		HKI/USAID
5 Trichiasis Surgery Instrument Sets	<b>\$1,945</b>		Dixey Instruments Ltd.