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**QUARTERLY TECHNICAL REPORT**

**Organization:** International Eye Foundation

**Country:** Bulgaria

**Project Name:** Program for Prevention of Blindness and Public Eye Health in Bulgaria

**Project Number:** 180-0032

**Project Officer:** Victoria M. Sheffield, Executive Director

**Cognizant Technical Officer:** Prof. Petja I. Vassileva

**Report dates:** from 1 January through 31 March 1993

**PROJECT STATUS:** Ongoing

**PROGRESS:**

**ACCOMPLISHMENTS:**

1. Meetings/IEF Sofia

A.I.D.

Prof. Vassileva continues to attend the monthly meetings held at the USAID/Sofia for the directors of AID-funded projects and regularly provides monthly highlights of the project's teaching courses and survey progress for the participants and visitors, as well as to inform the A.I.D. officers about current progress and problems of the project.

**International Eye Bank**

On January 17-20, 1993 Mr. Frederick Griffith, Chief Executive Officer of the International Federation of the Eye Banks visited Sofia for talks concerning the establishment of an Eye Bank in Bulgaria. During his initial site visit, Mr. Griffith studied the conditions for creating of eye bank. He met with Dr. Tancho Gugalov, Minister of Health, and discussed with him the legislation basis and appropriate site for developing such project in Bulgaria. Minister Gugalov was very supportive to the project, he stressed the priority need for creating an eye bank and the inclusion of this project into a package of strategic initiatives for health care.

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On January 19, 1993 Prof. Vassileva organized a meeting of Mr. Griffith with ophthalmologists from Sofia and the country who are active in the field of corneal surgery. Mr. Griffith gave a presentation about the history of the Eye Banks in the USA, and activities of the International Federation of Eye Banks. He discussed problems related to important principles for creating of eye bank in Bulgaria with the attending ophthalmologists. Most of the ophthalmologists expressed their satisfaction and belief that the creation of a Bulgarian Eye Bank would be possible shortly. It was planned to hold another meeting to discuss local problems. (See Memo Attachment A.)

Due to the recent problems with Prof. P. Guguchkova, all activities connected to the creation of an Eye Bank in Bulgaria are on hold until the situation stabilizes. (See notation under Item #8).

## **2. Midterm Evaluation**

From February 22 to February 26, 1993, a two-person Evaluation Team visited Sofia to conduct the mid-term evaluation of the project. Members of the team were: Donald McCorquodale, MD, MSPH, an expert in planning, design, implementation, and evaluation of health development programs, and James B. Sprague, MD, an ophthalmologist with over 20 years experience working with eye care NGOs in developing countries. Ms. Victoria Sheffield, IEF's Executive Director, who also manages the project was also present to facilitate the evaluation. The Team had a number of important meetings: with the field staff, the personnel of the Eye Clinic, the Minister of Health, the Deputy Health Minister and other country officials, the WHO Officers, the USAID representatives including Mr. Gerald Zarr, USAID Representative, and other counterparts in program related hospitals and institutions:

### **MOH**

"St. Anna" Hospital Office

Eye Clinic, "St. Anna" Hospital

Eye Clinic, "Queen Yoanna" Hospital

Chair of ophthalmology - Medical Institute, Plovdiv

Chair of ophthalmology - Medical Institute, Stara Zagora

Higher Medical Institute, Sofia / Dean Prof. O. Smilov

USAID Office in Sofia

WHO Office in Bulgaria / Dr. D. Mircheva

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National Center for Health Informatics  
International Health Foundation "St. Panteleimon"  
Union of Bulgarian Physicians / President Dr. Ignatov and Deputy Dr. Botev  
Sofia Ophthalmological Society / President Prof. Markov  
Bulgarian Medical Association

An appointment with Prof. P. Guguchkova, Head of Chair of Ophthalmology was scheduled in the preliminary program of the Evaluation Team, two attempts were made to meet with her. However, she cancelled the first meeting and did not show for the second which she herself scheduled. When the Evaluation Team visited the Chair of Ophthalmology for second time, they were accepted by Prof. Yankov from the Pediatric Clinic as Prof. Guguchkova refused the appointment again.

One of the main recommendations of the evaluators is that the IEF concentrate the remaining time in the project toward the public health aspects of the Center for Sight. Now that Prof. Vassileva is Head of the Eye Department and can fully integrate the Center for Sight within that department, she has much more control of the overall activities, i.e., she can give more time to the public health activities. Additionally, the survey data will serve as a working tool to convince the MOH and others of the need for better access to surgical services for cataract surgery and the need for public eye health education programs. The IEF feels that the evaluation has been very beneficial and will adjust it's activities to address the recommendations made. (See **Mid-Term Evaluation Report - Attachment B**).

**3. Participation in the ICO Planning Session February 11-12, 1993, Mexico City, Mexico**

Prof. Vassileva attended the long range planning session on the International Council of Ophthalmology in Mexico which were represented ICO, ACICO, WHO, and some NGO's. Prior to this meeting, Prof. Vassileva submitted questionnaires to ophthalmologists from over 20 post-communist countries of the former Eastern block, ex-Soviet republics, and ex-Yougoslavia, asking about their ideas regarding the future of ophthalmology. The planning session focussed on several major directions for the International Council of Ophthalmology, an environmental analysis was made including the external trends and needs; internal strenghts and weaknesses, and key strategic directions and goals of a long range plan were discussed at length.

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During the meeting Prof. Vassileva, as a representative for Central and Eastern Europe, discussed very important problems about Prevention of Blindness and Public Eye Health Care in post-communist countries. She had a long discussion with Mr. Alan Johns, President of the International Agency for the Prevention of Blindness (IAPB) related to organization of a satellite IAPB meeting in Bulgaria, planned to take place immediately after the Vth General Assembly of the IAPB in Berlin, May 1994.

Prof. Vassileva had important talks with the President of the European Council of Ophthalmology - Theodos, Dr. Bjorn Thylefors (Programme Manager, WHO/Prevention of Blindness Program), and others. The presentation on the IEF Prevention of Blindness program in Bulgaria in the XXVIIth International Congress of Ophthalmology - Toronto, 1994 was discussed at length with Dr. Rand Simpson from Canada.

#### **4. Training**

##### **Visiting Professor Program**

From 4 to 9 March, Prof. Harry Quigley M.D., Director of DANA Center for Preventive Ophthalmology and the Glaucoma Service at the Wilmer Eye Institute, the Johns Hopkins University, Baltimore, Maryland. Dr. Quigley is a leading specialist in glaucoma disease and is the sixth visiting professor to visit the Center for Sight. He examined and consulted many patients, discussed problem cases, and performed two operations at the Eye clinic. Prof. Quigley gave 10 lectures (at the Center for Sight and for Sofia Ophthalmological Society) perfectly illustrated with slides and videos. (See Prof. Quigley's Trip Report - Attachment C).

On March 6-7, Prof. Quigley participated in the re-training of the survey field teams, organized in Panichishte /a mountain resort in Rila County/, where he also gave 2 lectures to attending staff of the Eye clinic and ophthalmologists from the Eye Clinic - Transport Medical Institute. Prof. Quigley together with Prof. Vassileva visited Rila and Smochevo, and examined 4 patients with diagnosis of glaucoma and optic atrophy, indicated in Form 6, and referred by the field teams.

Dr. Quigley met with glaucoma specialists from Sofia, and had discussions with them on current problems of glaucoma management.

**6. Baseline Survey**

On March 6-7, 1993 a retraining of the field teams for Sofia City survey was organized at the mountain resort of Panichishte.

Prof. Quigley examined 4 patients, referred by the field teams to confirm the diagnoses.

On March 12, 1993 Prof. Vassileva travelled to Petrich to examine patients with diagnosis of glaucoma and optic atrophy, referred by the field teams, and to confirm the diagnoses.

Data entry for Rila, Petrich, Svoge, Pirdop, Dupnitsa and Radomir was completed, and disks sent to the DANA Center in Baltimore for analysis.

**5. Procurement of Supplies**

A donation consisting of medical equipment and medicines by ophthalmologists from Utah was sent to the Eye clinic on March 29, 1993 through the LDS Church. This donation was included into the "Eagle Project", organized by Eric Brinton, son of Dr. Gregory Brinton who visited the Center for Sight in July, 1992.

**6. Service Delivery**

**CLINIC OUTPATIENTS:**

Bulgarians	1698	1744
Foreigners	<u>51</u>	<u>51</u>
TOTAL	1749 (this quarter)	8353 (to date)

Breakdown: Bulgarians		Foreigners
January	605	15
February	490 (Mexico)	14
March	<u>603</u>	<u>22</u>
TOTAL	1698 (this quarter)	51

**SURGICAL OPERATIONS:**

Bulgarians	332	1499
<u>Foreigners</u>	<u>36</u>	<u>359</u>
TOTAL	359 (this quarter)	1858 (to date)

Breakdown:	Bulgarians	Foreigners
cataract extraction	86	8
cataract extraction w/ IOL	74	0
glaucoma procedures	14	3
retinal detachment	16	2
vitrectomy	28	3
cryo application	21	5
keratoplasty (corneal transplant.	7	2
strabismus surgery (squint)	12	1
lid procedures (plastic surgery)	5	2
<u>others</u>	<u>69</u>	<u>10</u>
TOTAL	332	36

**Treatment with Argon Laser - Out of order.**

**Friedman Analyzer: 27**

**Humphrey Field Analyzer (glaucoma patients): 17 - Out of order since second half of February.**

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**Patients Fitted with Donated (IEF) Toric Soft Contact Lenses:**

Bulgarians	89
Foreigners	<u>3</u>
TOTAL	92

Note:

- \* Approximately 2,000 contact lenses were provided to the Chair of Ophthalmology, Sofia (Prof. Guguchkova)
- \*\* 450 lenses were provided to the Higher Military Medical Institute, Sofia ( Assoc. Prof. Shivarov)
- \*\*\* 48 pcs Adapettes Eye Drops were provided to 30th Outpatient's Department, Sofia (Dr. Bratanov)

**7. Collaboration**

The IEF'S project in Bulgaria is currently collaborating with the following institutions:

- Division of Statistics at the MOH
- LDS Church, Salt Lake City and Sofia
- SEE International, Inc., USA
- International Federation of Eye Banks and Tissue Banks International

## **8. Principle Issues and Problems**

### **Problems with Prof. Guguchkova**

Prof. Guguchkova, Chairman of Ophthalmology at the Higher Medical Institute - Sofia, and Head of the Eye clinic, Alexandrovska Hospital, came to the Eye Clinic/Center for Sight at the St. Anna Hospital with 8 doctors from her staff. With the support of the Medical Director of the Hospital, Assoc. Prof. Chakarov, she forced Prof. Konstantinov, Chief of the Eye Clinic which houses the Center for Sight, out of the Eye Clinic, took over his office, and declared herself as Head of the Eye Clinic, "St. Anna" Hospital.

Prof. Guguchkova had no decree authorizing her to leave her previous position, and no formal appointment for "St. Anna" Hospital. She cancelled all scheduled operations and examinations and stated that all doctors from the Eye Clinic will be dismissed, including Prof. Vassileva, and sent them to the outpatient departments elsewhere in Sofia. A series of protests of the patients, the staff of St. Anna Hospital, and a general strong negative reaction (reflected widely in all mass media: TV, radio, everyday and weekly newspapers) followed. Prof. Vassileva had detailed discussions on the matter with the Minister of Health, the Dean of the Medical Faculty - Prof. Smilov, (Dr. Bozhkov, Gerrov and others). Prof. Guguchkova was then returned with her staff to the Aleksandrovska Hospital.

### **Changes in the Eye Clinic, St. Anna Hospital (formerly Mladost University Hospital, formerly Institute for Treatment of Foreign Citizens)**

Prof. Konstantinov, Head of the Eye Clinic, has officially retired as of March 1993 after the actions of Prof. Guguchkova. At the moment, Prof. Petja Vassileva has been appointed by decree from the current (third since the project began) Hospital's Medical Director, Assoc. Prof. Chakarov, to the position of Head of the Eye Clinic. However, it is not permanent as this position is competitive. Prof. Konstantinov has been invited to attend the clinic as a consultant.

### **Argon Endolaser ORION 3001**

The Argon Endolaser was out of commission for four and a half months, as there were difficulties with the technical maintenance of such equipment in Bulgaria. Currently, enquiries are being made about finding the most appropriate solution to the problem.

### **Humphrey Field Test Analyzer**

The Humphrey Field Analyzer was out of commission for one and a half months due to complete lack of technical maintenance capacity of such equipment in Bulgaria. The manufacturer in the US was contacted on the matter, and it is suggested that a detailed check-up be conducted. The IEF is procuring a service manual which does not normally come with the machine, in order that a local engineer can try to fix the malfunction.

## **8. Planned Actions Next Quarter**

Continuation of the Sofia Eye Survey - Sofia City Survey starts during the second week of April: field work, data entry, data analysis, and preparation of report.

Visit of Prof. Randall Olson, MD, Chairman of Ophthalmology Department, University of Utah, and one of the United States' leading specialists in anterior segment pathology and surgery, will visit during the second week of April to lecture, consult patients, and perform surgery.

Visit of Prof. Vassileva to Association for Research in Vision and Ophthalmology (ARVO) Meeting, Sarasota, Florida, and IEF Bethesda during the first two weeks of May. Prof. Vassileva will present the Sofia Eye Study data of the blindness prevalence survey conducted by IEF and the Dana Center for Preventive Ophthalmology at Johns Hopkins, and funded by AID. **(See abstract Attachment D).**

Visit of Dr. Zivojnovic from the Department of Ophthalmology A.Z. Middelheim - Antwerp, Belgium, a distinguished specialist in vitreoretinal surgery, in the beginning of May to lecture, and consult patients.

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Participation of Prof. Vassileva, representing IEF and the Center for Sight, at the Prevention of Blindness Symposium - Romania, held in collaboration with ORBIS International on 11 and 12 June, 1993.

**ATTACHMENTS:**

- A. Memorandum of the meeting of Mr. Frederick Griffith, Executive Director of IFEB, with Bulgarian ophthalmologists, 19 January 1993.
- B. Trip Report, Prof. Harry Quigley.
- C. Mid-Term Evaluation Report.
- D. Abstract of Sofia Eye Study to be presented at ARVO meeting in May.
- E. Quarterly Financial Summary.

**M E M O R A N D U M**

**of the meeting of the initiative group for the Eye Bank of Bulgaria,  
held on January 19, 1992 at the Eye Department, "St. Anna" Hospital,  
Sofia, Bulgaria**

On January 19, 1993 Mr. Frederick Griffith, Chief Executive Officer of the International Federation of Eye Banks met with ophthalmologists from Sofia and the country who are active in the field of the corneal surgery. The meeting took place at the Eye Department of University Hospital "St. Anna" - Sofia, and was attended by: Prof. Konstantinov, Head of Eye Department, University Hospital "St. Anna" - Sofia; Prof. Petja Vassileva, Eye Department, University Hospital "St. Anna" (formerly Mladost University Hospital), Center for Sight - Sofia; Prof. Gugutchkova, Head of Chair of Ophthalmology, Medical Academy (MA) - Sofia; Prof. Tanev, Chair of Ophthalmology, MA - Sofia; Prof. Mazhdrakova, Chair of Ophthalmology, MA - Sofia; Assoc. Prof. Filipov, Head of Chair of Ophthalmology, MA - Stara Zagora; Assoc. Prof. Balabanov, Head of Eye Department, MA - Pleven; Assoc. Prof. Andreev, Head of Eye Clinic, Transport Medical Institute - Sofia; Assoc. Prof. Misheva, Eye Clinic, University Hospital "St. Ana" - Sofia; Dr. Kaloyanov, Head of Eye Department, County Hospital - Haskovo; Dr. Nikolov, Eye Clinic, Military Medical Institute - Sofia; Dr. Mazgalova, Head of Tissue Bank, Pirogov Medical Institute - Sofia; Dr. Ivanov, Representative of MOH; Dr. Georgiev, Emergency Eye Clinic "Queen Joanna" Hospital - Sofia; Dr. Madjarov, Eye Department, University Hospital "Mladost" - Sofia and young ophthalmologists residents at the Eye Department - University Hospital "St. Anna".

Apologies for absence were received from:

Prof. Chilova, Head of Eye Department, MA - Plovdiv, who sent a representative of the clinic, Dr. Petkova.

From invited ophthalmologists absent without notification were:

Assoc. Prof. Mitov, Head of Chair of Ophthalmology, MA - Varna

Assoc. Prof. Tumbev, Head of Eye Department, County Hospital - Blagoevgrad

1. Mr. Frederick Griffith briefly reviewed the history of Eye Banks in the USA mostly created on the basis of tissue banks. In 1988 following a number of invitations and requests for co-operation an International Advisory Committee was formed comprising ophthalmologists from US and abroad with experience in corneal surgery. IFEB benefits from the technical expertise of TBI, the largest non-profit network of eye banks in the world.

A first initiative was creating two eye banks in Egypt that began with an initial site visit to the country, and gathering information about legislation, cultural traditions and religion, and identification of an appropriate eye bank site. Later on other banks were created in India, Morocco, Spain and Mexico following an action plan. Recently IFEB is working on several projects in India, Bangladesh, Greece and other countries.

In 1991, after a formal invitation, representatives of the IFEB visited Prague to study the conditions for creating an eye bank in Czechia. Five months after preliminary meetings and discussions one of the most successful working eye banks assisted by IFEB was opened in Prague where a training center was also created.

2. A number of questions were raised by the attending ophthalmologists relating to important principles for creating an eye bank in Bulgaria:

- Legislation basis. The "presumed consent clause" exists in Bulgarian Law for National Health Care, but some of the attending ophthalmologists expressed their concern because of permanent changes in Bulgarian legislation which may change this clause.

- Location of the eye bank. There were two alternatives suggested - to create the eye bank in the already existing Pirogov Tissue Bank or to situate it in one of the eye clinics in Sofia.

- Number of performed corneal grafts which require the efficiency of the regional eye bank. The estimate number of transplantations of corneal tissue in Bulgaria is ... per year, while patients that require keratoplasty are 500-600. In comparison to data from the USA, if the pathology in both countries is supposed to be similar, 1700 transplantations should be performed each year.

- Necessary tests of material for transplantation material

- Preserving solutions for corneal tissue.

Mr. Griffith responded to all questions providing detailed information on the problems. By his opinion the optimal location for the eye bank would be the already existing tissue bank. As a result of discussion with the Minister of Health, he assumes that Bulgarian legislation is appropriate as it contains a Presumed Consent Law, and permission to remove tissue is not necessary to be obtained from the family of the deceased.

After a number of studies done in the USA, no indications were found for transmission of infection with AIDS, syphilis or hepatitis through corneal transplantations. However, all materials for transplantation are being submitted for such testing.

Mr. Griffith emphasized that the IFEB is ready to provide financial and organizational support, know-how and opportunities for training of technical staff in training centers created in the USA and Prague. The tissue bank in Bulgaria will be renovated, equipped and provided with all necessary equipment and supplies by the IFEB.

Some of the attending ophthalmologists expressed skepticism concerning the possibility to overcome the number of obstacles faced during hitherto existing attempts to create such a bank in Bulgaria.

On behalf of the MOH Dr. Ivanov expressed satisfaction and emphasized the priority need for creating an eye bank. He thanked Mr. Griffith for the visit and expressed his satisfaction. He declared that this project would be included into the package of strategic initiatives of health care. The representative of the MOH stressed that the eye bank will be created for the benefit of patients, and it will facilitate all ophthalmologists in Bulgaria on equal terms.

The meeting lasted for about an hour and a half, and it was agreed that the points summarized above should be passed on to another meeting for discussing local problems of creating an eye bank, with a preliminary agenda, as follows:

1. Approval of memorandum from the meeting held on Jan. 19, 1993.
2. Location of the created eye bank in Sofia.
3. Legislation and normative acts concerning transplantation of organs and tissues in Bulgaria
4. Forming a Committee of experts which will include ophthalmologists active in grafting surgery.

P.S. Due to the recent problems with Prof. P. Guguchkova, all activities connected to the creation of an Eye Bank in Bulgaria were hold till the situation stabilizes.

A handwritten signature in black ink, appearing to be 'M. Ivanov', located at the bottom right of the page.

TRIP REPORT

GENEVA AND BULGARIA

MAY 1-10, 1993

Harry A. Quigley, MD  
Director, Dana Center for Preventive Ophthalmology  
Wilmer Institute 120  
Johns Hopkins Hospital  
Baltimore, MD 21287

**PURPOSES OF TRIP:**

1) Attendance at the Program Advisory Group meeting of the World Health Organization's Blindness Prevention Programme.

2) Consultation at the Center for Sight, Sofia, Bulgaria, on the Sofia Eye Survey, including diagnostic classification and data collection.

3) Training of personnel at the Center for Sight through lectures, clinical examinations, video presentations and participation in surgery.

4) Discussions of future interactions between Center for Sight, other Bulgarian ophthalmologists who head major programs in ophthalmic care, and WHO and US collaborators.

## CALENDAR OF ACTIVITIES:

- May 1: Travel from Baltimore to Geneva
- May 2: Attend WHO Blindness Prevention Meeting.
- May 3: WHO PBL meeting
- May 4: Travel from Geneva to Sofia, tour Center for Sight.
- May 5: Training sessions and lectures at Center for Sight.
- May 6: Travel by auto to Rila medical facility to examine survey patients. Two lectures to survey team and invited ophthalmologists.
- May 7: Further lectures to survey group. Return to Sofia. Evening meeting with Dr. Siarev, director of glaucoma services.
- May 8: Training sessions, ward rounds, two lectures, evening speech and discussion with Sofia Ophthalmological Society members.
- May 9: Performed surgery with observers, 2 video lectures
- May 10: Return to Baltimore via Frankfurt.

MAJOR OUTCOMES:

1) WHO BLINDNESS PREVENTION PROGRAMME ADVISORY GROUP

MEETING: At this session, comprising one week of meetings, presentations were made by Collaborating Centers, non-governmental organizations and by WHO staff regarding their activities during the two years since the last similar meeting.

Among the topics discussed at length were:

-- cataract surgical methods: who will perform the necessary procedures and with what techniques, including new, inexpensive instruments and microscopes.

-- new blindness surveys that are planned or ongoing in Baltimore, Melbourne, Taiwan, Nepal, and Bulgaria.

-- improved coordination of onchocerciasis treatment programs.

-- trachoma prevention by improved hygiene and longer-acting antibiotic treatment (a planned treatment trial in 3 countries).

-- recognition that new efforts toward the diagnosis and surgical treatment of glaucoma will bring this disorder more into the forefront of active programs.

-- present status of vitamin A supplementation research.

-- the problems of Eastern Europe as economic and political change impact upon health care.

2) CONSULTATION ON SOFIA EYE SURVEY:

The survey has been completed in the 4 originally selected areas and an additional group of urban election districts are to be selected from the Sofia district. Since detailed data on population characteristics are not available without extraordinary efforts, 3 city zones are to be selected randomly at the Dana Center in Baltimore. The detailed population demographics of these zones will then be obtained and the clusters within them to be surveyed will be selected.

The final diagnoses of those with visual impairment in the first 4 areas of the survey were reviewed. The unusual prevalence of primary optic atrophy was noted. All persons with either this diagnosis or glaucoma as a diagnosis were notified to return for repeat examination by Drs. Quigley and Vassileva. Those in Rila district came to Rila medical facility or were examined at home (4 persons). Others were asked to come to Sofia, but severe snowstorms hindered travel and only one person was examined. A trip by Dr. Quigley to the district north of Sofia to examine more persons in this group was also cancelled due to the weather. Dr. Vassileva was to re-examine all the remaining persons with primary optic atrophy as a diagnosis (approximately 10 persons). In addition, she will personally examine all visually impaired persons to determine final diagnosis in the Sofia district patients.

The re-examination of the 5 persons showed that glaucoma was, indeed, present in all 4 eyes of the 2 persons with a diagnosis of glaucoma, though it was determined that cataract was

the more likely cause of visual impairment in one of these eyes. Among 6 eyes of 3 persons with optic atrophy as a diagnosis, one person had bilateral optic atrophy with a clear history of a neurosurgical procedure for brain tumor 40 years prior. However, in the other 4 eyes of 2 persons, cataract and amblyopia were more likely causes of visual impairment, and there was no definite sign of primary optic atrophy. For this reason, it is strongly recommended that all persons with optic atrophy as a diagnosis be re-evaluated with a dilated examination to assess the cause of visual loss.

Xerox copies of Form 06 for all visually impaired persons were brought back to the Dana Center, Baltimore. Copies of the data diskettes of all survey subjects were shipped to Baltimore, as well. The coordination of the data analysis from the initial 4 sites will continue during the next 1-2 months.

### 3) TRAINING AT THE CENTER FOR SIGHT:

Dr. Quigley delivered 9 lectures during the stay in Sofia and Rila. These encompassed the diagnosis of primary and secondary glaucoma, the examination of the optic disc and the retinal nerve fiber layer, automated visual field testing, laser surgery and operative surgery for glaucoma, and diagnostic methods including applanation tonometry.

Instruction in clinical examination techniques included methods of slit lamp examination, tonometry (a means to dilute the available 2% fluorescein eyedrops to allow applanation was devised), visual field testing with the Humphrey perimeter, and optic disc examination.

It is evident that interest in appropriate techniques is high among the trainees. It is further evident that teaching and practice are limited to varying degrees by the absence of equipment or supplies. The new perimeter has a serious malfunction in the bowl background illumination that requires service. Dr. Quigley will attempt to have a long distance correction of this problem by contacting the Humphrey service office in San Leandro, California.

The operating theatre is adequate in size and configuration and instruments were available to carry out trabeculectomy, ciliodestruction by cryotherapy, and combined lens implant/trabeculectomy. Where supplies are not practical due to cost, alternatives have been sought (i.e. replacement of viscoelastic material during cataract surgery with an anterior chamber maintainer designed in Israel). However, the lack of suitable number and size of surgical gloves leads to bare-handed surgery, or to use of gloves on consecutive cases.

### 4) DISCUSSIONS OF FUTURE INTERACTIONS:

It is evident that a broader interaction between WHO collaborating centers such as the Dana Center and ophthalmologists in Bulgaria would be desirable and welcomed by those in positions of authority there. Dr. Quigley met and held a lengthy discussion with over 60 members of the Sofia

Ophthalmological Society. This provided information to both groups about the latest circumstances of medical and ophthalmic care in each country. The discussions were frank and spirited.

Dr. Quigley had an extended conversation with Drs. Siarov and Rankova, who direct the glaucoma service at the University Hospital in Sofia. Unfortunately, Dr. Guguchkova, who serves as chairperson of ophthalmology, was out of the country during this period. During this discussion, it became evident that a survey of visual impairment in Sofia had been performed by Dr. Siarov approximately 15 years ago. These data could be compared to the present Sofia Eye Survey. The precise details of the survey methods and selection criteria must be evaluated by inspection of data that Dr. Siarov can send. The present methods of diagnosis and therapy of glaucoma and other disorders in Bulgaria were discussed and compared to Western European countries and to the U.S. It may be beneficial to increase the interaction between eye care professionals in Bulgaria and the international organizations that specialize in teaching and research, such as the European and American Glaucoma Societies. The cost of travel to the meetings of these groups is presently beyond the means of Bulgarian doctors.

Further discussions revealed possible coordinate research projects that could utilize the strengths of each group. For example, Dr. Rankova has performed initial clinical studies of injections of hyaluronidase to improve the functioning of glaucoma operations that appear to be failing. Consultation in study design and data analysis could benefit this work. Additional animal studies to define the optimal dose for later human trials are more practical at present in the U.S.

Dr. Quigley also met with Dr. Konstantinov, the director of the ophthalmology service in which the Center for Sight resides.

It is reasonable to categorize the Eastern European countries at this time into 3 groups. The first of these, including Poland, Czechoslovakia, Hungary, and the former East Germany, have already achieved a financial and medical status that is close to that of Western European countries. The second group consists of Bulgaria, Yugoslavia, Albania, the Baltic states, and Rumania. These countries, for various reasons, have a much more substantial handicap in developmental progress. The third group consists of the former republics of the Soviet Union, whose status is considerably worse than any of the others. In our interactions with these countries, it is important not to consider them as a uniform group. Rather, each has historical and practical differences that will affect their future and their medical needs.

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MID-TERM EVALUATION  
PROGRAM FOR PREVENTION OF BLINDNESS AND  
PUBLIC EYE HEALTH IN BULGARIA

Donald W. MacCorquodale, M. D., M. S. P. H. and James B. Sprague, M. D.

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## **EXECUTIVE SUMMARY**

This innovative and important project was undertaken in a former communist nation to establish a comprehensive out-patient and surgical eye care facility using a United States model, to obtain baseline data on the prevalence of ocular disease and blindness, and to prepare a strategy for reducing blindness in the country. Such a facility, the Center for Sight, has been established, and the survey has been completed. It is imperative at this time to concentrate on further development of the public health aspect of the program.

Bulgaria has been described as being in a state of quasi-anarchy in its efforts to establish a democratic government and a free market economy. This political turmoil and that between the Director of the Center for Sight and one academic Chair of Ophthalmology in the country have hampered the development of this program.

We would like to express our sincerest gratitude to the Minister of Public Health of Bulgaria; Dr. Tancho Gugalov, and the many Bulgarian ophthalmologists, public health specialists, and other physicians, who gave so generously of their time in allowing us to interview them. The quality of this evaluation would have been severely compromised without their gracious cooperation.

We are also grateful for the able assistance of Ms. Victor M. Sheffield, Executive Director, International Eye Foundation; Bethesda, Maryland, Mr. Gerald Zarr, Representative, U. S. Agency for International Development, Bulgaria; and Dr. Sheila West, Dana Center for Preventive Ophthalmology, Johns Hopkins University, Baltimore, Maryland.

## I. BACKGROUND

### A. THE HOST COUNTRY

Bulgaria is a nation of approximately, 8,974,900 inhabitants (1). It has an area of 44,365 square miles, and hence, it is about the size of Ohio (2). It is bordered by the Black Sea to the east, Romania to the north, Yugoslavia to the west, and Turkey and Greece to the south. The per capita GNP in 1989 was U. S. \$5,660, although this has almost certainly declined in recent years. We were assured that the GDP decreased by 20% in 1992 (3). Inflation was almost 80% during 1992, and unemployment was approximately 12%. Previously productive farms have been dismantled with a precipitous drop in agricultural production. Crime has increased sharply as police powers have been reduced and the morale of the army and police force has declined.

The communists took power with Soviet aid in 1946, and the monarchy was abolished. Todor Zhivkov, who had held power for 35 years, resigned in November 1989. The parliament revoked the provision in the constitution that

guaranteed the dominant role of the Communist Party in January 1990 (2). As noted earlier, the country is currently undergoing considerable political and economic turmoil during its attempts to establish a stable, democratic form of government and a free market economy.

This socioeconomic turmoil is reflected in the latest demographic data for Bulgaria. The crude death rate, 12.3, exceeded the crude birth rate, 10.7, in 1991, which resulted in a negative rate of natural growth of 1.6 percent (2). Similar conditions prevailed in 1990.

Infant mortality in 1991 was 16.9 per 1,000 live births, which represents an increase of 14% over that of 1990, 14.8 (2). About 46 percent of all infant deaths occurred in the postneonatal period.

During the communist era, Bulgaria realized modest progress in the field of medical science, and providing medical care for foreigners was the source of considerable foreign exchange. Ophthalmologic equipment, medications, and supplies were obtained from the former German Democratic Republic. Surgical techniques in ophthalmology were similar to those used in the west some 10 to 15 years ago. There was however a technical revolution in ophthalmology abroad during that period, one marked by the introduction of new surgical techniques that have markedly improved visual outcome with fewer complications. The nations of eastern Europe had little exposure to these new developments and little or no access to the medical literature of the west. The collapse of the German Democratic Republic has resulted in the loss of a source of supply of ophthalmological equipment and supplies for Bulgaria.

#### B. THE PROGRAM FOR PREVENTION OF BLINDNESS AND PUBLIC EYE HEALTH IN BULGARIA

The International Eye Foundation (IEF), 7801 Norfolk Avenue, Bethesda, Maryland, responded to a request for proposals issued by the U S Agency for

International Development (AID) on November 20, 1990, and IEF received a grant of \$525 thousand for a three-year period from AID on January 12, 1991 to establish a Center for Sight within the old Institute for the Treatment of Foreign Citizens to serve the people of Bulgaria (4). The Center was established in conjunction with the Ministry of Health, the Medical Academy, and the University of Bulgaria.

Unhappily, the creation of the Center for Sight as it was constituted within the former Institute for the Treatment of Foreign Citizens was immediately opposed by Professor P. Gugutchkova, Chair of Ophthalmology of the Medical Faculty Sofia, and her colleague and former Chair, Professor V. Tanev.

At the time this grant was awarded to IEF, Professor Petja Ivanova Vassileva, a Bulgarian ophthalmologist, was completing an M. P. H. degree in preventive ophthalmology at the Johns Hopkins University School of Hygiene and Public Health. She was subsequently appointed the Director of the Center for Sight and the Program for Prevention of Blindness and Public Eye Health in Bulgaria.

The goal of the program was stated as follows: "To reduce the prevalence of blindness and sight impairing disease in Bulgaria by raising the level of eye care services to internationally recognized standards through the establishment of an ophthalmic infrastructure capable of providing all Bulgarians access to adequate and appropriate care (5)."

## II. METHODOLOGY

This evaluation was conducted by the review of relevant documents and by interviews. Document reviews were conducted in Washington, D. C., Bethesda, Md., and Sofia, Bulgaria. The principle source of information however was interviews, particularly those conducted in Bulgaria. A list of those individuals

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interviewed is attached as Appendix A. It should be noted that while we made every effort to interview Professor P. Gugutchkova, Chair of Ophthalmology, Medical Faculty Sofia, we were unable to do so.

### III. FINDINGS

It was quite clear that the Program for the Prevention of Blindness and Public Eye Health in Bulgaria has thus far not succeeded in reducing "the prevalence of blindness and sight impairing disease," the stated goal of the program. This is not a criticism of the program but rather of the excessively ambitious statement of the goal. The Center can serve as a tertiary referral center for the entire country, however given its limited size, it simply cannot "provide all Bulgarians access to . . . care."

The project objectives will be considered in turn:

1. **Establish a Center for Sight in Sofia within the old Institute for the Treatment of Foreign Citizens.** This center will provide a full range of ophthalmic services for the people of Sofia District, and will serve as a tertiary referral center for people throughout the country.

The Center for Sight has been established within the old Institute for the Treatment of Foreign Citizens, now the Mladost University Hospital. It consists of an administrative office, an office for the Director, and a superbly equipped examination room. The staff consists of the Director, Professor Petja Vassileva; the Administrative Officer, Dr. Krassimir Kushev; a secretary; and a driver.

The administrative office is equipped with desks, a word processor, telephones, a fax machine, and a photocopier. The car and driver are used primarily for the convenience of the Director

The outpatient examining room contains the following equipment: a projector, a slit lamp with tonometer, a photo slit lamp, a keratometer, a fundus camera, an examination chair, an equipment stand, an auto refractor, a

computerized visual field machine, an A scan, and miscellaneous medications. This equipment is not integrated into the hospital examining routine. It is not used by the other two senior ophthalmologists on the staff of the Mladost University Hospital. It is used by the junior staff members primarily when the Director, Dr. Vassileva, is present.

If this equipment should be damaged there is no assurance of prompt repair, and there is always the risk of theft. Use of the equipment only when the Director is present minimizes the risk of damage and theft, and hence, the practice can be regarded as appropriate and useful.

The operating room of the Mladost University Hospital is equipped with a coaxial microscope, an endolaser, a vitrectomy machine, three indirect ophthalmoscopes, a cryotherapy machine, a diathermy, explants, and encircling elements. This equipment is used by all the staff. This practice may have resulted in the breakage of one vitrectomy hand piece and the theft of another (6). The vitrectomy machine is currently inoperative.

It is apparent that the Center for Sight does not at this time have a firm institutional base. It is physically present in the Mladost University Hospital, but it is not an integral part of it. No doubt, it appeared to have had such a base when the Center was established since the creation of the Center was approved by the Ministry of Health, the Medical Academy, and the University of Bulgaria. It is worth noting that there have been three Ministers of Health in Bulgaria since the Center was created

The number of Bulgarian citizens receiving surgical treatment for eye disorders has increased dramatically since the Center for Sight was established as is shown in the accompanying tables (7)

..... Clinic Patients .....

May-Sept 91 Oct-Dec 91 Jan-Mar 92 Apr-June 92

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Foreigners	94	49	51	91
Bulgarians	468	368	820	1286
Totals	562	417	871	1377

Surgical Operations

	May-Sep 91	Oct-Dec 91	Jan-Mar 92	Apr-Jun 92
Foreigners	79	66	42	32
Bulgarians	37	80	208	277
Totals	116	146	250	309

It is not clear if this increase is due largely to the provision of surgical care on the part of the Director of the Center for Sight, to the provision of such care on the part of other members of the Eye Department of Mladost University, or both. The latter seems more likely.

**2. To upgrade the Ophthalmology Residency Training Program through a Visiting Professor Program providing six experts per year to the center.**

Six highly qualified ophthalmologists have visited Bulgaria through this program. Four were specialists in vitreoretinal disease, one in plastic surgery, and one in glaucoma. All but one have lectured at other sites in the country, and they have been well received by graduate ophthalmologists.

There is no clearly defined ophthalmology residency program in Bulgaria (8). There are however young graduate physicians who are receiving training in ophthalmology, including six such trainees in the Mladost University Hospital. It is difficult to assess how useful the highly technical information imparted by the visiting professors was to these young doctors

The concentration on vitreoretinal disease has increased the demand for sophisticated equipment as well as for indirect ophthalmoscopy. Lectures on this

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subject are irrelevant to most practicing ophthalmologists since the only endolaser in the country is that donated by IEF. Lectures on appropriate surgical management of cataracts would probably have been more useful for those ophthalmologists who have had minimal exposure to western medical concepts.

The visiting professor part of the program has added to the political problems of the Center for Sight over the issue of who was to host them. It appears that Professor Gugutchkova was unwilling to share sponsorship as proposed by the Director of the Center for Sight. Professor Vassilva elected to have the lectures to be given in the limited space available at Mladost University Hospital. Holding the lectures in another venue might have reached a larger audience, but this is by no means certain. Those ophthalmologists working in the same institution with Professor Gugutchkova probably would not have attended for fear of evoking her displeasure.

**3. To improve the technology, equipment, and medical supplies for the Center for Sight.**

This objective has certainly been achieved. The equipment and supplies provided have greatly enhanced the clinical ability of Mladost University Hospital. The operating room of the latter has the only endolaser as well as the only functioning YAG laser in the country. The outpatient area has the only computerized visual acuity machine. There is a good supply of intraocular lenses and topical medications, which are lacking in other similar departments.

**4. To conduct a basic blindness prevalence survey in Sofia District to gather baseline data on the leading causes of blindness in the area.**

A survey based on a probability sample of the adult population of Sofia District has been conducted, and such a survey is scheduled to be conducted in the city of Sofia. IEF showed great flexibility and resourcefulness in obtaining assistance from the Dana Center for Preventive Ophthalmology, Johns Hopkins

University, when it became apparent that outside help would be necessary. Dr. Sheila West played a crucial role in establishing the sampling frame, selecting the sample, designing and testing a manual for field operations, and designing the forms used for individual respondents (9). The physician teams were carefully trained, and excellent equipment was provided for the physician-examiners.

The field support provided by Dr. Krassimir Kushev was exemplary, and Professor Vassileva ably assisted in the conduct of the survey. Associate Professor Tanya Cholakova and her colleagues at the National Center for Health Informatics, Sofia, have done a masterful job of preparing the raw data for computerized analysis in Baltimore.

The participation of Johns Hopkins University personnel in conducting this survey will almost certainly render the findings immune to criticisms regarding sample size and methodology, validity of the findings, and other similar questions that so frequently plague similar studies. Although the survey was limited to the western part of the country, it will prove invaluable to planning for unmet needs to restore vision in that heavily populated area, and it can serve as an example for surveys to be conducted in the future in other parts of the country.

**4. To establish a National Blindness Prevention Committee according to World Health Organization guidelines with the goal of developing a public health oriented National Blindness Prevention Program for the country.**

The *raison d'être* for a prevention of blindness committee appears to be poorly understood. Simply stated, it itemizes needs as derived from projections of the survey data, and it determines and mobilizes resources from the government, the private sector, physicians, and non-physician community leaders. Unhappily, the concept has been denuded by some Bulgarians as only appropriate for "developing countries."

This IEF project is directed toward the prevention of blindness. A large portion of the grant however was used to build a strong clinical facility. This was felt to be essential by some ophthalmologists with whom we spoke, for it provided credibility to the Director (3).

Nonetheless, it was rather disappointing to hear nothing of plans for projecting the number of cataract procedures from the survey data, the number of patients with diabetic retinopathy in need of care, etc., in short, no specific plans to make use of the data when it becomes available.

We did speak with some individuals, particularly Associate Professor Philipov, who had an in-depth understanding of the need for and the role of a National Prevention of Blindness Committee (10, 11). The on-going political struggle between Professor Gugutchkova and Professor Vassileva appears to have made some important figures in Bulgarian ophthalmology reluctant to publicly support the concept.

If the creation of a National Prevention of Blindness Committee is not feasible, it would be very useful to assess the resources available in Sofia District, i. e., ophthalmologist with surgical training, suture material, etc. Dr. Kushev could almost certainly do this if directed to undertake such a study.

**5. Facilitate the process for the Center for Sight to apply to become an official WHO Collaborating Center.**

This is not feasible at the present time, but the Center for Sight well might be in a position to apply to become such a Center in the future.

#### **IV. Issues.**

##### **1. Review strategy, program, and management activities.**

a. The statement of the needs for ophthalmology in Bulgaria were appropriate

b. The objectives were appropriate as well

c. It is difficult to assess the appropriateness of the management structure and style of the Center, for we do not have a background in Bulgarian culture and social norms. The fact that the Center has accomplished so much since it was created suggests that management structure and style have indeed been appropriate.

d. The issue of the use of ophthalmologic equipment when the Director of the Center is away is addressed in Section III. 1.

e. What is the acceptability and relative priority of the program to the Government of Bulgaria? The question raises the issue of who speaks for the Government of Bulgaria in this regard. We have assumed it would be the Minister of Health. When we spoke with him, we felt he was not familiar with the project or at best had but minimal familiarity with it (12). He did however promise his support.

It is worth noting that the project did enjoy the support of the President of the Medical Academy and the Dean of the Medical Faculty Sofia (3, 13).

**2. Assess the strategies in order to determine the likelihood of reaching the objectives stated in the DIP.**

As noted earlier in this report, most of the objectives are being met, except that related to making the Center a WHO Collaborating Center.

**3. Assess what has been achieved in terms of measurable inputs.**

The equipment, supplies, and visiting professors that have been provided are detailed in Sections III 1 and 2.

**4. Assess what has been achieved in terms of measurable outputs.**

The training of ophthalmologists, the prevalence of blindness survey, and the National Blindness Prevention Committee are discussed in Sections III. 2, 3, and 4

**5. Assess appropriateness of inputs and outputs listed above.**

These issues are discussed in Section III.

**6. Identify the strengths and weaknesses which facilitate or inhibit the accomplishments of the IEF'S program activities.**

**a. Personnel**

The respect that Professor Vassileva enjoys on the part of many of her colleagues and other physicians in Bulgaria is an asset. The current clinical direction of the center reflects her long clinical training, and it must be recognized that her experience in the field of public health is limited to the training she received at Johns Hopkins University.

Dr. Krassimir Kushev's background in epidemiology and public health and his devotion to his work make him a very real strength for this program. This was exemplified by his performance during the field work of the prevalence of blindness survey.

**b. Infrastructure**

The equipment of the Center for Sight, including diagnostic ophthalmologic equipment, is a distinct strength.

**c. Political environment.**

This is a weakness. The political struggle between Professor Gugutchkova and Professor Vassileva has been an obstacle to the creation of a National Prevention of Blindness Committee. The lack of political stability at the national level and the economic uncertainty with regard to the future cannot help but adversely affect the implementation of a new program.

**7. Identify any obstacles, particularly those identified by the Grant proposal, which could prevent or have prevented the program from reaching its goal.**

The rivalry between Professors Gugutchkova and Professor Vassileva have been discussed early

The lack of a well established, clearly defined residency program for training ophthalmologists is an obstacle to achieving one of the stated objectives of the program.

The lack of government personnel who are well trained in survey methodology, and especially sampling theory, is another obstacle. Additional surveys of blindness to cover the entire Bulgarian population would be extremely helpful in planning for the prevention of blindness. Foreign assistance will be needed however to carry this vital work further.

A modern library of current books and periodicals devoted to ophthalmology is absent, which is a detriment to the further development of ophthalmology in Bulgaria.

8. Identify program areas, activities, and procedures which could benefit from fine-tuning.
9. Identify the steps the IEF might employ to ensure that all components are completed by the end of the Grant which is 30 April 1994.
10. Provide recommendations that are meaningful within the context of the present political, social, and economic environment with respect to the project's priorities as well as the effectiveness of the DIP.

This issue will be addressed in a separate section, VI.  
Recommendations.

## **V. Key Questions**

1. How do actual achievements compare with projections?

They compare quite favorably as we pointed out in the section on objectives, Section III.

2. Has the number of patients seen in both the eye clinic and surgery increased since the project began?

Yes See Section III 1

**3. Has the number of patients needing sophisticated care utilizing the modern equipment and surgical techniques provided by the IEF's technology transfer and visiting professors increased?**

Yes. See Section III. 1.

**4. Do the ophthalmologists who have attended the lectures conducted by the visiting professors felt that these visits have been appropriate and useful?**

We were able to interview five senior ophthalmologists who had attended these lectures, and all of those were agreed that the visits were useful. One junior ophthalmologist also attended the lectures, and he felt the material presented may have been too complex to be useful for the young physicians training in ophthalmology. This question is also addressed in Section III. 2.

**5. Was the survey conducted according to plan?**

Yes. See Section III. 4.

**6. Will the survey be useful in planning for a National Blindness Prevention Program?**

The findings from this survey cannot be generalized to the entire adult population of Bulgaria. They will nonetheless be useful as discussed in Section III. 4.

**7. Are the current activities to encourage the establishment of a National Blindness Prevention Committee appropriate?**

We felt that Professor Vassileva had temporarily ceased her efforts to form such a committee in view of the intense opposition of Professor Gugutchkova and the resultant reluctance of some important ophthalmologists to publicly favor the formation of a committee. If so, her action was clearly understandable. Given the political changes that have occurred since we left Bulgaria, it would certainly be appropriate now to begin anew.

**8. Is the level of staffing of the Mladost University Hospital Eye Department and Center for Sight appropriate?**

No. There are three positions for ophthalmologists at the Eye Department which are currently unfilled.

**8. Should the Center for Sight change any of its directions given the current slow progress toward autonomous management and the lack of any fee for service or insurance schemes for health care in the country?**

The Center for Sight cannot be expected to have much influence on "progress toward autonomous management and the lack of fee for service or insurance schemes . . ." It is nonetheless providing high quality ophthalmological care to an increasing number of patients, and it should continue to do so.

**9. Has the program prepared its counterparts sufficiently so that they can assume the management of the program at the end of the Grant period?**

The Director of the program can readily assume the management of the clinical aspects of the program. Whether or not the Director can provide the leadership necessary for the preventive ophthalmology aspect of the program is another matter. In our judgment, IEF will have to intensify its efforts to implement the preventive ophthalmology program for the remaining life of the project if it is to prosper.

**10. What additional benefits have been accomplished by the project?**

The prevalence of blindness survey has provided a sampling frame for additional studies in other public health areas. The same areas selected for the survey can be re-surveyed for other epidemiological studies, and the investigators who undertake these studies can be assured that the sample is representative. Implementing the survey trained many individuals in techniques, which can be useful in future similar surveys in other parts of the country.

The visiting professor program almost assuredly created an interest in the visiting ophthalmologists in Bulgarian ophthalmology and also evoked their desire to be helpful to their Bulgarian counterparts in as far as they are able to do so in the future.

**11. Does this project provide a good foundation/infrastructure on which to build other ophthalmic activities? If not, why not?**

If the Center for Sight becomes genuinely integrated into the Mladost University Hospital structure and continues to enjoy the support of the Ministry of Health and the Medical Faculty Sofia, it will be a good foundation on which to build further ophthalmological activities.

**VI. RECOMMENDATIONS**

**1. The Center for Sight should give the highest possible priority to implementing the preventive ophthalmology aspect of its program.**

As quickly as the complete data for the Sofia District survey becomes available, the Center for Sight, ideally with assistance from the National Center for Health Informatics, should develop projections of the number of adults in the District who are blind from cataracts, the number with diabetic retinopathy, and hence, in need of care, etc. This would facilitate intelligent, long-term health care planning

Efforts should be renewed to establish a National Blindness Prevention Committee. The Center for Sight should consider seeking leadership for this effort from the Minister of Health, the Dean of the Medical Faculty Sofia, or some other respected but relatively neutral figure in the political sense. If the formation of a National Blindness Prevention Committee does not appear feasible at this time (and it is worth noting that only Bulgarians can make such an assessment intelligently), the formation of a Sofia District Blindness Prevention Committee should be considered

**2. The Center for Sight and IEF should undertake a variety of activities to create a more favorable image.**

The Director for the Center for Sight should arrange to have the presentations of future visiting professors given at other institutions under the auspices of corresponding co-hosts. The Queen Joanna University Hospital should be considered as well as the Medical Faculty Sofia. Dean Smilov has already indicated his interest in such an arrangement.

If at all possible, the office space for the preventive ophthalmology/IEF program should be separated from Professor Vassileva's clinical examination area and her private office. The project vehicle and driver should be used strictly for project purposes, rather than for the personal transportation of Professor Vassileva.

The Center for Sight should consider establishing a small library of ophthalmological materials in the Mladost University Hospital for the use of all ophthalmologists in Sofia or even Bulgaria. IEF should consider sending a paid subscription of a highly respected American ophthalmology journal to each of the five Chairs of Ophthalmology as a gift from IEF and the Center for Sight.

**3. The Center for Sight may wish to consider taking a leadership role in establishing an eye bank in Sofia.**

There is interest on the part of an outstanding eye bank specialist in the United States in helping establish an eye bank in Bulgaria. There are Bulgarians who are trained in performing corneal transplants and do them on a limited basis. They are severely constrained in providing this much needed service by the lack of readily available corneas.

The Center should not devote its time and resources to this project until the survey, including the data analysis, is completed, projections of sight impairing disorders have been made for Sofia District, and a roster of available resources in the District for meeting the need has been established

**4. The Center for Sight may wish to consider working jointly with the ophthalmologists of the Medical Faculty Sofia to create a standardized, well defined residency program for the training of ophthalmologists.**

Such a program is greatly needed in Bulgaria, however creating a standardized residency program is a formidable undertaking. This recommendation should only be considered after the Center has implemented its preventive ophthalmology program.

**5. The Center for Sight and IEF provide visiting professors with backgrounds in those areas that are most relevant for the further professional development of practicing ophthalmologists in Bulgaria.**

As noted earlier, there is clearly a need for teaching state of the art surgical management of cataract. It is highly questionable if further teaching of vitreo-retinal disease management will be useful.

**6. IEF and the Agency for International Development should extend this project for an additional two years.**

An ultimate outcome of this program which is greatly to be desired is the creation of a viable, self-sustaining institution. We do not feel that the Center for Sight is likely to prove self-sustaining without further assistance. A great deal has been accomplished. The Center for Sight has conducted the only scientifically respectable prevalence of blindness survey in eastern Europe, and it has the potential of becoming a model for further AID assistance in this vitally important field embracing clinical medicine and disease prevention

**7. Lastly, IEF should entrust its final evaluation of this program only to individuals who are already familiar with this program and ophthalmology in Bulgaria.**

Evaluation visits are necessarily short, and a great deal of time is lost if those undertaking an evaluation are entirely strange to the country setting and the

program being evaluated. Using consultants already familiar with both the setting and the program will result in a much more insightful and useful evaluation.

## REFERENCES

1. Ministry of Health. National Center for Health Informatics. Public Health Statistics Annual, Bulgaria, 1991. Tcholakova T, Bogdanov A., and Hristova S. (eds.). Sofia: 1992.
2. The World Almanac and Book of Facts, 1992. Hoffman M. S. (ed.). New York: Pharos Books, 1991.
3. Interview, Dr. Petko Uzunov, President of the Medical Academy, Sofia, February 24, 1993.
4. AID IEF/Bulgaria Project No. 180-0032, January 12, 1991.
5. Detailed Implementation Plan. I. E. F. - U. S. A. I. D. Cooperative Agreement # EUR-0032-A-00-1032-00, Project Number 180-0032. October 1991.
6. Interview, Prof. Petja Vassileva, Center for Sight, Sofia, February 24, 1993.
7. Quarterly Technical Report. IEF. Bulgaria. April through June 1992.
8. Interview, Prof. Nikola Konstantinov, Head of Eye Department, Mladost University Hospital, Sofia, February 24, 1993.
9. Interview, Dr. Shiela West, Dana Center for Preventive Ophthalmology, Johns Hopkins University, Baltimore, Md., February 12, 1993.
10. Interview, Associate Professor Philipov, Chair of Ophthalmology, Stara Zagora Medical Institute, Sofia, February 25, 1993.
11. Interview, Professor Blaga Chilova-Atanasova, Chair of Ophthalmology, Plovdiv, Sofia, February 26, 1993.
12. Interview, Dr. Tancho Gugalov, Minister of Health, Sofia, February 23, 1993.
13. Interview, Professor Ivan Smilov, Dean, Medical Faculty Sofia, Sofia, February 24, 1993.

## APPENDIX A

### INDIVIDUALS INTERVIEWED

Mr. Gerald Zarr  
USAID Representative

Mr. Bozhil Kostov  
AID Program Specialist

Tancho Gugalov, M. D.  
Minister of Health

Dora Mircheva, M. D.  
WHO Liason Officer

Plamen Kenarov, M. D.  
Medical Director,  
University Hospital Queen Joanna

Mr. Radi Kabaivanov  
President  
International Health Foundation  
St. Panteleimon

Dimitar Ignatov, M. D.  
President,  
Union of Bulgarian Physicians

Stoyan Botev, M. D.  
Secretary-General,  
Union of Bulgarian Physicians

Prof. Blaga Chilova-Atanasova  
Chair of Ophthalmology  
Plovdiv

Prof. Tzvetan Markov  
Sofia

Assoc. Prof. Tenchev  
University Hospital St. Ana

Prof. Yankov  
Chair of Ophthalmology  
High Medical Institute

Assoc. Prof. Tchakarov  
Medical Director,  
University Hospital St. Ana

Bojidar Madjarov, M. D.  
Eye Department  
Mladost University Hospital

Prof. Petja Vassileva  
Eye Department  
Mladost University Hospital

Assoc. Prof. Hristova  
University Hospital St. Ana

Prof. Petko Uzunov  
President, Medical Academy

Assoc. Prof. Tany Cholakova  
National Center for Health Informatics

Prof. Ivan Smilov  
Dean of the Medical Faculty Sofia

Krassimir Kushev, M. D.  
Executive Officer  
Center for Sight

Assoc. Prof. Phillipov

## ABSTRACT FOR ARVO

**SOFIA EYE SURVEY: BLINDNESS AND VISUAL IMPAIRMENT IN BULGARIA.** P.I. Vassileva (1), S.C. Gieser (2), S.K. West (2), T. Cholakova (3), J. Katz (2), P. Amudiev (3), K. Kushev (1), V. Sheffield (4). Center for Sight (1), Sofia, Bulgaria; Dana Center (2), Baltimore, MD; National Center for Health Informatics (3), Sofia, Bulgaria; International Eye Foundation (4), Bethesda, MD.

Purpose. A population-based blindness survey was undertaken in Sofia district, Bulgaria, to provide the first data on visual impairment from Eastern Europe. Methods. A sample of 4500 adults age 40 and older was randomly selected from census data using a stratified two-stage sampling scheme. Three urban and three rural counties were randomly chosen and census clusters from within the counties randomly selected. A house-to-house census and visual acuity screening was performed in each cluster. Those with pinhole acuity in their best eye of 6/18 or worse were given a full eye exam. Results. Data from the first county suggest 2.9% of adults had visual impairment (24 of 831 adults). The causes of visual impairment were cataract (42%), diabetic retinopathy (15%), optic atrophy (14%), AMD (12%), glaucoma (4%), and others (13%). Conclusions. Results from the six counties will be described, but cataract is likely to be a major cause of visual impairment.

Supported by USAID co-operative agreement EUR-0032-A-00-1032-00, T32 EY07047, S10-RR04060, and by the International Eye Foundation.

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FINANCIAL STATUS REPORT  
(Short Form)

(Follow instructions on the back)

1. Federal Agency and Organizational Element to Which Report is Submitted Agency For International Development	2. Federal Grant or Other Identifying Number Assigned By Federal Agency EUR-0032-A-00-1032-00	OMB Approval No 0348-0039	Page 1	of 1 pagos
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3. Recipient Organization (Name and complete address, including ZIP code)  
International Eye Foundation  
7801 Norfolk Avenue, Suite 200  
Bethesda, Maryland 20814

4. Employer Identification Number 52-0742301	5. Recipient Account Number or Identifying Number 553021783	6. Final Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Basis <input checked="" type="checkbox"/> Cash <input type="checkbox"/> Accrual
-------------------------------------------------	----------------------------------------------------------------	----------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

8. Funding/Grant Period (See Instructions) From: (Month, Day, Year) 04/16/91	To: (Month, Day, Year) 04/15/94	9. Period Covered by this Report From: (Month, Day, Year) 01-01-93	To: (Month, Day, Year) 03-31-93
------------------------------------------------------------------------------------	------------------------------------	--------------------------------------------------------------------------	------------------------------------

10 Transactions:	I Previously Reported	II This Period	III Cumulative
a. Total outlays	609,005	23,756	632,761
b. Recipient share of outlays	274,622	-0-	274,622
c. Federal share of outlays	334,383	23,756	358,139
d. Total unliquidated obligations			-----
e. Recipient share of unliquidated obligations			-----
f. Federal share of unliquidated obligations			-----
g. Total Federal share (Sum of lines c and f)			358,139
h. Total Federal funds authorized for this funding period			525,000
i. Unobligated balance of Federal funds (Line h minus line g)			166,861

11 Indirect Expense	a. Type of Rate (Place "X" in appropriate box) <input checked="" type="checkbox"/> Provisional <input type="checkbox"/> Predetermined <input type="checkbox"/> Final <input type="checkbox"/> Fixed			
	b. Rate 18.70%	c. Base	d. Total Amount	e. Federal Share

12. Remarks Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation

13. Certification I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

Typed or Printed Name and Title Victoria M. Sheffield, Executive Director	Telephone (Area code, number and extension) 301-986-1830
Signature of Authorized Certifying Official 	Date Report Submitted 04-30-93

4/2