

Agency for International Development
Washington, D.C. 20523

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SEP 19 1991

George Contis, M.D., M.P.H.
Medical Service Corporation
Incorporated
1716 Wilson Boulevard
Arlington, VA 22209

Subject: Grant No. EUR-0037-G-00-1083-00

Dear Dr. Contis:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "A.I.D.") hereby provides to Medical Service Corporation International (hereinafter referred to as "MSCI" or "Grantee") the sum of \$2,421,612 in support of their program entitled "Improving the Management of Cardiovascular Diseases in Bulgaria" under the Partnerships in Health Care in Eastern Europe project, as more fully described in Attachment 2, entitled "Program Description".

This Grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives through the estimated completion date of September 30, 1994. Funds disbursed by A.I.D. but uncommitted by the Grantee at the expiration of this period shall be refunded to A.I.D.

The total estimated amount of the program is \$2,421,612. Initial funding herein obligated is in the amount of \$801,000 (hereinafter referred to as "Obligated Amount"), and the incremental (additional) funding of \$1,620,612 may be provided, subject to availability of A.I.D. funds, after the effective date of this grant. Such incremental funding, if authorized, shall be provided through grant modifications. A.I.D. shall not be liable for reimbursing the Grantee for any costs in excess of the obligated amount.

This Grant is made on the condition that the funds will be administered in accordance with the terms and conditions as set forth in this Cover Letter, Attachment 1, entitled "Schedule", Attachment 2, entitled "Program Description", and Attachment 3, entitled "Standard Provisions", which together constitute the entire Grant document and have been agreed to by your organization.

Please acknowledge receipt of this Grant by signing all copies of this Cover Letter, retaining one copy for your files, and returning the remaining copies to the undersigned.

Sincerely,



Diane M. Miller
Grant Officer
Overseas Division - Eastern Europe
Office of Procurement

Attachments:

1. Schedule
2. Program Description
3. Standard Provisions
4. Special Provision "Certification Regarding Lobbying"

ACKNOWLEDGED:

MEDICAL SERVICE CORPORATION INTERNATIONAL

BY: _____

TYPED OR PRINTED NAME: George Contis, M.D., M.P.H.

TITLE: President

DATE: September 25, 1991

FISCAL DATA

A. GENERAL

- A.1. Total Grant Amount: \$2,421,612
- A.2. Total Obligated Amount: \$801,000
- A.3. Project No.: 180-0037
- A.4. A.I.D. Project Office: ENE/DR/HPN, J. Terry
- A.5. Funding Source: A.I.D./W
- A.6. Paying Office: FA/FM/CMPD/DC - Room 700 SA-2
Washington, D.C. 20523-0209
- A.7. DUNS No.: 08-235-2212
- A.8. E.I. No.: 52-0995423

B. SPECIFIC

- B.1.(a) PIO/T No.: 180-0037-3-1183736
- B.1.(b) Appropriation: 72-11X1010
- B.1.(c) Allotment: 184-63-180-01-69-11
- B.1.(d) BPC: QAIX-91-33180-IG-12
- B.1.(e) Amount: \$801,000

SCHEDULE

A. PURPOSE OF GRANT

The purpose of this Grant is to provide support for Partnerships in Health Care between medical facilities in the United States and medical facilities in Eastern Europe, as more specifically described in Attachment 2 of this Grant entitled, "Program Description."

B. PERIOD OF GRANT

B.1. The effective date of this Grant is the date of the Grant Officer's signature on the Grant Cover Letter, and the estimated completion date is September 30, 1994.

B.2. Funds obligated hereunder are available for program expenditures for the estimated period from September 19, 1991 to approximately September 30, 1992.

C. AMOUNT OF GRANT AND PAYMENT

C.1. The total estimated cost of the program described in Attachment 2 of this Grant is \$2,421,612.

C.2. A.I.D. hereby obligates the amount of \$801,000 (Hereinafter referred to as "Obligated Amount") for program expenditures during the estimated period set forth in B.2. above.

C.4. Payment shall be made to the Grantee in accordance with procedures set forth in the Standard Provision entitled "Payment - Periodic Advance", as set forth in Attachment 3.

D. GRANT BUDGET

D.1. The following is the Budget for this Grant. Except as specified in the Standard Provision of this Grant entitled "Revision of Grant Budget", as set forth in Attachment 3, the Grantee may adjust budget amounts within the total agreement amount as may be reasonably necessary for the attainment of program objectives.

D.2. Budget	OBLIGATED AMOUNT		REMAINING TO BE FUNDED	TOTAL
	9/19/91 - 9/30/92	10/1/92 - 9/30/94		
(a) DIRECT COSTS				
Salaries & Wages	\$86,182	\$185,134		\$271,316
Consultants/Research	62,500	143,000		205,500
Travel and Per Diem	127,967	240,310		368,277
Expendable Supplies and Materials	3,600	5,940		9,540
Nonexpendable Equip.	58,044	95,200		153,244
Subcontracts	196,263	388,334		584,597
Participant Training	45,217	97,985		143,202
Other Direct Costs	51,885	111,687		163,572
SUBTOTAL	\$631,658	\$1,267,590		\$1,899,248
(b) INDIRECT COSTS				
Overhead	\$56,018	\$120,337		\$176,355
G&A	113,324	232,685		346,009
SUBTOTAL	\$169,342	\$353,022		\$522,364
TOTAL AMOUNT	801,000	\$1,620,612		\$2,421,612

E. REPORTING REQUIREMENTS

E.1. Financial Reporting

E.1.(a) Financial reporting requirements shall be in accordance with the Standard Provision of this Grant entitled, "Payments - Periodic Advance," as set forth in Attachment 3.

E.1.(b) All financial reports shall be submitted to A.I.D., Office of Financial Management, (FM/CMP), Washington, D.C. 20523. In addition, three copies of all financial reports shall be submitted to the A.I.D. Project Office specified in the Cover Letter of this Grant.

E.1.(c) With the exception of the final financial report, all financial reports shall be submitted within 30 days following the end of the reporting period. The final financial report shall be submitted within 90 days following the estimated completion date of this Grant.

E.2. Program Performance Reporting

The Grantee shall submit the following:

E.2.(a) Workplans

The initial workplan shall include an implementation plan for the initial, authorized year of the project. It will be due within 45 days after the signature date of the grant, and shall indicate the timing, by month, of the various components and subcomponents of the program over the 12 month period of implementation. It shall indicate the responsible organization and/or individual for each subcomponent or activity.

At least 45 days before the end of the initial workplan period, Grantee shall submit a workplan for the next 12 month period. If Grant is authorized for a third year, a workplan for the third year of the project will be due at least 45 days before the end of the year covered by the second workplan.

E.2.(b) Quarterly Reports by Reference to Quantifiable Indicators and Other Evaluation Benchmarks

E.2.(b)(1) The Grantee shall submit five copies of quarterly program performance reports which coincide with the financial reporting periods described in Section E.1. above to the A.I.D. Project Office specified in the Cover Letter of this Grant, and to the A.I.D. Representative (or AID Affairs Officer, Economic Section at the Embassy) of the country where the program is being undertaken. These reports shall include quantitative and qualitative measures of performance; shall be submitted within 30 days following the end of the reporting period; and shall briefly present the following information:

E.2.(b)(1)(A) Implementation status including a comparison of actual accomplishments with the established evaluation benchmarks for the period, the findings of the investigator, or both. If the output of programs can be readily quantified, such quantitative data shall be related to cost data for computation of unit costs.

E.2.(b)(1)(B) Reasons why established goals were not met, if applicable, including any problems or difficulties requiring U.S.G., possibly host country, or implementing organization attention.

E.2.(b)(1)(C) Summary financial report of all project expenditures, by subcomponent.

E.2.(b)(2) Between the required performance reporting dates, events may occur that have significant impact upon the program. In such instances, the Grantee shall inform A.I.D. as soon as the following types of conditions become known:

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E.2.(b)(2)(A) Problems, delays, or adverse conditions that will materially affect the ability to attain program objectives, prevent the meeting of time schedules and goals, or preclude the attainment of work units by established time periods. This disclosure shall be accompanied by a statement of the action taken, or contemplated, and any U.S.G., or possibly host country, assistance needed to resolve the situation.

E.2.(b)(2)(B) Favorable developments or events that enable time schedules to be met sooner than anticipated or more work units to be produced than originally projected.

E.2.(b)(2)(C) If any performance review conducted by the Grantee discloses the need for change in the budget estimates in accordance with the criteria established in the Standard Provision of this Grant entitled "Revision of Grant Budget", the Grantee shall submit a request for budget revision to the Grant Officer and the A.I.D. Project Officer specified in the Cover Letter of this Grant.

E.2.(b)(3) Quarterly updates and proposed modifications of annual work plans, specifically to include travel projected for the subsequent quarter.

E.2.(c) Annual Report of Project

The annual report will be submitted to both ENE/EUR, A.I.D. Washington and to the A.I.D. Representative (or the AID Affairs Officer, Economic Section at the Embassy) of the country where the program is being undertaken. The annual report will substantively review performance against planned quantitative and qualitative measures, including a discussion and analysis of the success of the program's impact per the established mechanism(s) for measuring the partnership's impact on (a) excess mortality and morbidity rates for the chosen medical problem in the area served by the Eastern European partner; (b) knowledge and skills of each partners' staff; and (c) the extent to which the partners incorporate joint activities into their individual operations. Incremental funding will be contingent on submitting complete reporting, effectively resolving implementation problems, as well as on the availability of funds and any revisions in the overall program structure that A.I.D. may require.

Within 60 days following the estimated completion date of this Grant the Grantee shall submit five copies of the final report as indicated in the preceding paragraph. It should include: (1) an executive summary of the Grant's accomplishments or failings; (2) a description of the Grant activities from its inception; (3) significance of these activities; (4) comments and recommendations; (5) a fiscal report that describes in detail how the Grant funds were used.

E.2.(d) Evaluations

E.2.(d)(1) The project will be closely monitored on a continuing basis by the Project Office shown in the cover letter of this Grant (under Fiscal Data, Item A.4.).

E.2.(d)(2) An independent evaluator will assess the effectiveness of the health care partnership. Grantee shall cooperate fully with the assessment of partnership activities.

F. Closeout Procedures (OMB Circular A-110)

1. This paragraph prescribes uniform closeout procedures for AID agreements and cooperative agreements.

2. The following definitions shall apply for the purpose of this paragraph:

(i) Closeout. The closeout of a agreement is the process by which AID determines that all applicable administrative actions and all required work of the agreement have been completed by the Grantee and AID.

(ii) Date of completion. The date of completion is the date on which all work under agreements is completed or the date on the award document, or any supplement or amendment thereto, on which AID sponsorship ends.

(iii) Disallowed costs. Disallowed costs are those charges to a agreement that AID or its representative determines to be unallowable, in accordance with the applicable Federal cost principles or other conditions contained in the agreement.

3. AID closeout procedures include the following requirements:

(i) Upon request, AID shall make prompt payments to a Grantee for allowable reimbursable costs under the grant or agreement being closed out.

(ii) The Grantee shall immediately refund any balance of unobligated (unencumbered) cash that AID has advanced or paid and that is not authorized to be retained by the Grantee for use in other grants or cooperative agreements.

(iii) AID shall obtain from the Grantee within 90 calendar days after the date of completion of the agreement all financial, performance, and other

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reports required as the condition of the agreement. AID may agreement extensions when requested by the Grantee.

(iv) When authorized by the agreement, AID shall make a settlement for any upward or downward adjustments to AID's share of costs after these reports are received.

(v) The Grantee shall account for any property acquired with AID funds, or received from the Government in accordance with any provisions of this agreement.

(vi) In the event a final audit has not been performed prior to the closeout of the agreement, AID shall retain the right to recover an appropriate amount after fully considering the recommendations on questioned costs resulting from the final audit.

G. INDIRECT COST RATES

Pursuant to the Standard Provision of this Grant entitled, "Negotiated Indirect Cost Rates - Provisional," a rate or rates shall be established for each of the Grantee's accounting periods which apply to this Grant. Pending establishment of revised predetermined, provisional or final indirect cost rates for each of the Grantee's accounting periods which apply to this Grant, provisional payments on account of allowable indirect costs shall be made on the basis of the following negotiated provisional rate(s) applied to the base(s) which is (are) set forth below.

<u>Type</u>	<u>Effective Period</u>		<u>Overhead(a)</u>	<u>G&A(b)</u>
	<u>From</u>	<u>Through</u>		
Provisional	1-1-88	Until Amended	65.00%	18.00%

Base of Application

(a) Base salaries and wages excluding vacation, holiday, and sick pay.

(b) Total cost but excluding G&A and Equipment

H. TITLE TO PROPERTY

Title to property purchased by the Grantee under this Grant shall be vested in the Grantee. The Standard Provision of this Grant entitled "Title to and Care of Property (Grantee Title)" applies. Disposition of property shall be in accordance with said Standard Provision.

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I. PROCUREMENT AND (SUB) CONTRACTING

I.1. Authorized Geographic Code

All services shall have their nationality in the United States (A.I.D. Geographic Code 000) or the Cooperating Country (Bulgaria, A.I.D. Geographic Code 183), except as A.I.D. may otherwise agree in writing. The authorized source and origin for all goods/commodities shall be in accordance with the Optional Standard Provision entitled, "A.I.D. Eligibility Rules for Goods and Services (November 1985)"; however, since at this time, the countries of Eastern and Central Europe are excluded from A.I.D. Geographic Code 935, wherever in the Optional Standard Provision either A.I.D. Geographic Code 935 appears, or "Cooperating Country" appears, A.I.D. Geographic Code 183 is hereby included or authorized. Requests for deviations to this requirement must include a full justification to be submitted to the Project Office indicated in the cover letter of this Grant. Approval of the Grant Officer and the Project Office is required before procurement of this nature can be undertaken. Ocean shipping financed by A.I.D. under the program shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

I.2. Procurement Cost Detail

Whenever feasible, the lead U.S. grantee and/or its subgrantees will be responsible for purchasing the U.S. equipment and commodities required for the technical assistance components of the program. This equipment must be specifically and directly linked to the training programs undertaken under the various subcomponents. The prime grantee will be responsible for providing more exact details and specifications of the commodities they propose to procure, including estimated costs of same, in their application to A.I.D.

I.3. Government Owned Organizations

A Government Owned Organization, i.e., a firm operated as a commercial company or other organization (including nonprofit organizations other than public educational institutions) which are wholly or partially owned by governments or agencies thereof, are not eligible as suppliers of goods and commodities, commodity-related services, or services (other than commodity-related services), except as the Grant Officer may otherwise agree in writing.

I.4. Travel

The standard provision entitled "Air Travel and Transportation" which requires advance notification of the Project Officer of the Grantee's travel intentions overseas, is required. The

Grantee is also required to provide advance notification of intention to travel to the Embassy or A.I.D. Mission in the Cooperating Country.

All air travel and transportation under this grant are required to be made on U.S. flag carriers to the extent service by such carriers is available, in accordance with the aforementioned Standard Provision.

J. SPECIAL PROVISIONS

For the purposes of this Grant, references to "OMB Circular A-122" in the Standard Provisions of this Grant shall include the A.I.D. implementation of this Circular, as set forth in Subpart 731.7 of the A.I.D. Acquisition Regulation (AIDAR) (48 CFR Chapter 7).

J.2. Equipment and Other Capital Expenditures

J.2.(a) Requirement for Prior Approval

Pursuant to the Standard Provisions of this Grant entitled "Allowable Costs" and "Revision of Grant Budget," the Grantee must obtain A.I.D. Grant Officer approval for the following:

Purchase of General Purpose Equipment, which is defined as an article of nonexpendable tangible personal property the use of which is not limited only to research, medical, scientific, or other activities (e.g., office equipment and furnishings, air conditioning equipment, reproduction and other equipment, motor vehicles, and automated data processing equipment, having a useful life of more than two years and an acquisition cost of \$500 or more per unit.)

J.2.(b) Approvals

In furtherance of the foregoing, the Grant Officer does hereby provide approval for the following purchases, which shall not be construed as authorization to exceed the total estimated amount or the obligated amount of this Grant, whichever is less (see Section C. above):

- 1. Computer w/ Printer
- 2. Desks w/ Chairs

J.3. Salaries: MSCI and Subcontractor Employees

Except as the Grant Officer may otherwise agree in writing, A.I.D. shall not be liable for reimbursing the Grantee for any costs allocable to the salary portion of direct compensation

paid by the Grantee to its employees or to subcontractor employees for personal services which exceed the highest salary level for a Foreign Service Officer, Class 1 (FS-1) as periodically amended.

Salaries specified in MSCI's grant application, specifically for Dr. George Contis of MSCI, and Dr. Evangelos A. Petropoulos and Dr. Joel Kupersmith of the Institute of International Health at Michigan State University, are hereby approved, but not to exceed the Executive Level II Salary, as periodically amended. As of the effective date of this grant, the Executive Level II Salary is \$125,100.

J.4. Consultant Fees

Compensation for consultants retained by the Grantee hereunder shall not exceed, without specific approval of the rate by the Grant Officer, either the highest rate of annual compensation received by the consultant during any full year of the immediately preceding three years, or the maximum rate of a Foreign Service Officer, Class 1 (FS-1), as periodically amended, whichever is less. A daily rate is derived by dividing the annual compensation by 2,087 and multiplying the result by 8.

K. ORDER OF PRECEDENCE

The Grantee's application of June 24, 1991 and revision of August 23, 1991 are hereby incorporated by reference. In the event of any inconsistencies in this Grant, they shall be resolved by applying the following descending order of precedence:

- Attachment 1 - Schedule
- Cover Letter
- Attachment 3 - Standard Provisions
- Attachment 2 - Program Description
- Grantee's Application and Revision

L. STANDARD PROVISIONS

L.1. The Standard Provisions set forth as Attachment 3 of this Grant consist of the following Standard Provisions marked by an "X", which are attached hereto and made a part of this Grant:

L.2. MANDATORY STANDARD PROVISIONS FOR U.S. NONGOVERNMENTAL GRANTEEES

- (X) Allowable Costs (November 1985)
- (X) Accounting, Audit, and Records (September 1990)
- (X) Refunds (September 1990)
- (X) Revision of Grant Budget (November 1985)

- (X) Termination and Suspension (May 1986)
- (X) Disputes (November 1989)
- (X) Ineligible Countries (May 1986)
- (X) Debarment, Suspension, and Other Responsibility Matters (March 1989)
- (X) Nondiscrimination (May 1986)
- (X) U.S. Officials Not to Benefit (November 1985)
- (X) Nonliability (November 1985)
- (X) Amendment (November 1985)
- (X) Notices (November 1985)

L.3. OPTIONAL STANDARD PROVISIONS FOR U.S. NONGOVERNMENTAL GRANTEES

- () Payment - Letter of Credit (November 1985)
- (X) Payment - Periodic Advance (January 1988)
- () Payment - Cost Reimbursement (November 1985)
- (X) Air Travel and Transportation (November 1985)
- (X) Ocean Shipment of Goods (May 1986)
- (X) Procurement of Goods and Services (November 1985)
- (X) AID Eligibility Rules for Goods and Services (November 1985)
- (X) Subagreements (November 1985)
- (X) Local Cost Financing (November 1988)
- (X) Patent Rights (November 1985)
- (X) Publications (November 1985)
- () Negotiated Indirect Cost Rates - Predetermined (May 1986)
- (X) Negotiated Indirect Cost Rates - Provisional (May 1986)
- (X) Regulations Governing Employees (November 1985)
- (X) Participant Training (May 1986)
- (X) Voluntary Population Planning (August 1986)
- (X) Protection of the Individual as a Research Subject (November 1985)
- (X) Care of Laboratory Animals (November 1985)
- () Government Furnished Excess Personal Property (November 1985)
- (X) Title To and Use of Property (Grantee Title) (November 1985)
- () Title To and Care of Property (U.S. Government Title) (November 1985)
- () Title To and Care of Property (Cooperating Country Title) (November 1985)
- () Cost Sharing (Matching) (November 1985)
- (X)(1) Use of Pouch Facilities (November 1985)
- (X) Conversion of United States Dollars to Local Currency (November 1985)

1. The address in paragraph (a) (4) of this Provision should be changed to add -0001 after 20523 (the zip code).

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1.0

EXECUTIVE SUMMARY

1.1

PARTNERSHIP AND PROGRAM TO BE SUPPORTED

GOAL: The goal of this project is to reduce the morbidity and mortality from cardiovascular diseases in Bulgaria, a leading cause of death in that country. It will involve the collaborative efforts of the Second National Centre of Cardiovascular Diseases in Sofia; the Institute of Cardiovascular Diseases of Sparrow Hospital, and Michigan State University's (MSU) College of Human Medicine, East Lansing, Michigan; and Medical Service Corporation International, of Arlington, Virginia.

PURPOSE: The purpose of this project is to improve the capabilities of Bulgarian health professionals to manage cardiovascular diseases.

The project will establish a program of continuing medical education (CME) for health professionals who provide care for patients with cardiovascular diseases, including family physicians, cardiologists, cardiac surgeons, nurses and ancillary personnel. The CME program will begin first with the staff of the Second National Centre for Cardiovascular Diseases (SNCCD). It will then be expanded to reach the medical staff at tertiary, secondary and primary care facilities throughout Bulgaria.

In addition, a selected number of staff from the SNCCD, Sparrow Hospital and the MSU College of Human Medicine will exchange visits for short periods to observe the procedures and technology used by their counterparts in the treatment of cardiac patients. Subsequently, the staff of the SNCCD, with assistance from their U.S. counterparts, will review and revise existing cardiac patient management protocols. These will be published and disseminated to health professionals throughout Bulgaria.

In conjunction with the Bulgarian Ministry of Public Health, the staff of the SNCCD will help initiate a national health awareness campaign. The purpose will be to educate the Bulgarian people about the risk factors for heart disease.

ANTICIPATED RESULTS: The transfer of medical knowledge about the prevention and management of cardiovascular diseases to Bulgarian health professionals will enhance the medical community's ability to check the growing incidence of heart disease. The combination of a program of continuing medical education and a public awareness campaign will result in a reduction in the morbidity and mortality due to cardiovascular diseases in the long term.

This project will establish a closer relationship between the medical communities of Bulgaria and the United States. It will increase demand for biomedical equipment and pharmaceuticals, and create a stimulus to the Bulgarian pharmaceutical and equipment industries which are currently stagnating.

WHY THIS PROGRAM IS ESSENTIAL TO THE PRIORITY AREAS OF THE PARTNERSHIPS IN HEALTH CARE PROGRAM: The Second National Centre of Cardiovascular Disease has the stature and the policy-making responsibility to have a direct and immediate impact on how cardiac care is practiced in Bulgaria. As the focal point

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for the CME program, it can influence the entire health care community's approach to dealing with the problem of excessive morbidity and mortality from cardiovascular diseases.

1.2 TECHNICAL AND MANAGERIAL RESOURCES OF PARTNERS

U.S. Medical Partners: Sparrow Hospital, affiliated with Michigan State University in Lansing, Michigan, is a teaching hospital whose Institute of Cardiovascular Diseases provides a full range of clinical care services. It operates a comprehensive continuing medical education program for health professionals, patients and the community, and conducts a sophisticated research program in cardiac diseases. The Department of Continuing Medical Education of MSU has one of the most respected CME programs in the U.S., and specializes in training trainers.

U.S. Management Partner: Medical Service Corporation International has been providing health care, administration, manpower training, and disease control services to over 45 countries since 1973. As a health contractor to the U.S. Agency for International Development, MSCI is familiar with the Agency's policies and procedures related to grants and cooperative agreements. Among the activities MSCI has managed for A.I.D. are the Schistosomiasis Research Project in Egypt involving grants to U.S. and Egyptian universities, and a training program for nurses in Swaziland which was rated as one of A.I.D.'s "Fifty Best Projects."

Eastern European Partner: The Second National Centre of Cardiovascular Diseases is Bulgaria's most prestigious institution involved in cardiac disease care and research. It provides clinical services for patients in the Sofia metropolitan area and cardiac referral services for the rest of Bulgaria. The head of the SNCCD is Professor Alexander Tschirkov, a dynamic leader who left a position as head of an active cardiovascular program in West Germany to return to his country and establish the SNCCD.

1.3 HOW THE PROGRAM WILL BE MANAGED

MSCI will enter into a grant agreement with A.I.D. for the management of this project. Technical services will be provided by the SNCCD, Sparrow Hospital, and MSU under subcontracts with MSCI. Each of the partner organizations will appoint a Co-Project Director who will supervise and coordinate technical activities with its counterparts. A Project Advisory Committee will give policy guidance to the project, and a Project Management Committee will supervise its implementation.

A full-time Bulgarian project staff at the SNCCD will provide day-to-day technical and administrative support for the project in Bulgaria. MSCI will assign a Project Manager and staff from MSCI's Eastern European Medical Management Center to give administrative, financial, and procurement support.

1.4 FUNDING REQUEST FROM A.I.D.

A grant is requested for \$2.44 million over a three year period.

2.0

PROGRAM NARRATIVE

2.1

SIGNIFICANCE OF THE MEDICAL PROBLEM IN TERMS OF EXCESS MORTALITY AND MORBIDITY

While mortality rates for cardiovascular disease (CVD) have declined since 1970 in most industrialized countries, mortality rates for CVD have actually increased in Eastern Europe. Bulgaria, in particular, has the highest death rate for CVD in all of Europe, and it is estimated that 800,000 Bulgarians suffer from CVD. Official statistics from Bulgaria show that more than 60 percent of all deaths are due to cardiovascular diseases, of which ischemic heart disease (IHD) and cerebrovascular diseases predominate.

At present, Bulgaria ranks fourth among western industrialized nations in the rate of increase of mortality from myocardial infarction. IHD is affecting larger numbers of younger men. Of particular concern is the increase in the death rate from IHD among men 35 to 64 years of age in Bulgaria, which is now 227/100,000 (U.S. rate is 197/100,000). In the past two decades, this has contributed to a decrease in life expectancy in Bulgaria among males over 30.

Many Bulgarians at risk for IHD will go on to develop heart problems. In 1990, over 14,000 people died of a heart attack in Bulgaria. Of special relevance to the proposed project is the fact that up to 70 percent of these people never received qualified medical care.

Epidemiological studies done in Bulgaria during the past several years demonstrate the high prevalence of atherogenic risk factors for IHD, especially arterial hypertension, high blood cholesterol and smoking. Beginning in 1985, the Countrywide Integrated Non-communicable Diseases Intervention (CINDI) Program surveyed the prevalence of the major cardiovascular disease risk factors in four north-central districts of Bulgaria.

The study's results indicated that 24.5 percent of the surveyed population from 15 to 64 years of age had blood pressure higher than 140/90 mm Hg. Of these, 43 percent were untreated. For the capital city, Sofia, the percentage of hypertension, both borderline and sustained, was 33.5 percent. The study results further indicated poor medical control among hypertensives, particularly men under 50.

Countrywide, it is estimated that 800,000 persons have hypertension, for whom treatment is insufficient. By and large, physicians know how to diagnose and treat the disease, but follow-up care by both doctors and patients is inadequate, particularly when combination therapy is required.

Some antihypertension drugs are produced in Bulgaria, but the quality of these is said to be poor. Side effects, allergies and incompatibilities traced to inadequate quality control contribute to the public's poor perception of the efficacy of hypertension therapy. Some Bulgarians can afford to buy the more expensive imported drugs, but the majority cannot. Thus, large numbers of persons are inadequately treated, if at all.

The CINDI Project also revealed a high level of blood cholesterol (greater than 5.16 mmol/l) in approximately 39 percent of the surveyed population. Further, the study showed that 47 percent of the subjects were overweight. The Bulgarian diet includes large amounts of pork, beef, cheese, kashava (a dairy product), and canned foods -- all high in fats and cholesterol. Bread is an important staple in the diet, but fish, vegetables and fruits are not. While Bulgaria produces vegetables and fruits in large quantities, these were largely exported for hard currency under the previous regime. As a result, fruits and vegetables are uncommon in the Bulgarian diet.

A high prevalence of smoking was also discovered in the CINDI study population. Almost 50 percent of Bulgarian men, and 16 percent of Bulgarian women, smoke at least 10 cigarettes per day. Young people start smoking at about the age of 14. While there is a general awareness of the harmful effects of smoking, there is no local or nationwide anti-smoking campaign. In addition, since there is a important tobacco industry in Bulgaria, there are some economic disincentives associated with anti-smoking efforts.

Rheumatic fever is still an important cause of valvular and endocardial disease in Bulgaria. In western nations, this disease has been practically eliminated through the early diagnosis and treatment of streptococcal infections, and the aggressive management of recurrent infections in those who do acquire the disease. Unfortunately, this is one highly preventable form of cardiovascular disease which still persists in Bulgaria.

Lack of easy access to health facilities, especially in rural areas of Bulgaria, encourages inadequate home care of streptococcal infections. It is believed that the failure of parents to seek prompt medical attention for children with streptococcal infections is also an important reason for the persistence of rheumatic fever. In addition, family physicians, especially in rural areas, may not be aggressive enough in their diagnosis and treatment of recurrent strep infections.

Regarding the Bulgarian health care system's ability to deal with the management of patients with cardiovascular diseases, several factors should be taken into consideration. First, the overall clinical preparation of general physicians is good. Until recently, however, the medical educational system was based on the Soviet model. This placed emphasis on centers of special care, usually associated with teaching institutions, which served primarily the more privileged bureaucracy. At present, rural areas have primary health facilities staffed by general physicians, and larger cities have secondary and tertiary level hospitals with some specialists (e.g., internists, cardiologists, general surgeons, obstetricians, gynecologists, pediatricians and neurologists).

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Care in the Bulgarian health system is of variable quality. Primary and secondary care facilities located throughout the country have inadequate amounts of biomedical equipment and supplies. The equipment is old and requires frequent repairs. At the peripheral level, diagnostic, therapeutic and intensive care capability, particularly for cardiovascular diseases, is poor.

Family physicians at the periphery of the health care system do not have biomedical equipment to diagnose myocardial infarctions. Nurses are poorly paid, have little or no continuing medical education after graduation, and have low status and self-esteem. Professional isolation, a laissez-faire attitude among health professionals about cardiovascular risk factors, an increasingly stressful lifestyle, lack of exercise and the prevalence of a second disease such as diabetes, contribute to the inadequate management of cardiovascular patients.

To complicate matters, public awareness of the risk factors for cardiovascular diseases is low. Under previous governments, there was little interest in promoting public health education. No real effort was devoted to providing the public with information about the causes of poor health. Morbidity and mortality figures were not made available to the public, and the health programs of the various ministries largely ignored this matter.

Thus, the existence of multiple risk factors, together with poor disease management and decreased public awareness about risk factors help explain Bulgaria's high cardiovascular mortality rate.

2.2

ANTICIPATED RESULTS AND IMPACTS ON THE PROBLEM

It is expected that this project will achieve a transfer of medical skills and knowledge about the prevention, diagnosis and treatment of cardiovascular diseases in Bulgaria. This will enhance the Bulgarian medical community's ability to check the growing incidence of heart disease in the country.

We will quantify the results of the Partnerships Program by documenting the training of physicians and nurses in continuing education programs; by assessing the operation of ICUs and CCUs in the Bulgarian hospitals involved; and by monitoring the progress of physicians in adopting new diagnosis and treatment protocols.

One objective will be to reach all health professionals at SNCCD by the end of the first year of the project and to establish CME programs in five of twenty target general hospitals by the end of the second year. By the third year, we expect to begin training programs in an additional ten general hospitals.

Patient chart reviews will be used to assess changes in patient management by physicians and nurses. Knowledge, attitudes and practice studies of health professionals will assess the effectiveness of the CME programs.

Other effects of this project will be the development of a closer relationship between the medical communities of Bulgaria and the United States. In addition, with the transfer of medical knowledge, we expect to see an increased demand for biomedical equipment and pharmaceuticals. This requirement will create a stimulus to the Bulgarian pharmaceutical industry which in the past has been a major supplier to the Eastern Block and the USSR but is currently stagnating.

It will not be possible to demonstrate an immediate effect on CVD morbidity or mortality statistics for obvious reasons. What we hope to accomplish will be to modify some of the clinical factors which impact on morbidity and mortality.

2.3 APPROPRIATENESS OF OVERALL MEDICAL APPROACH TO EXPERIENCE EASE OF PARTNERS AND SIGNIFICANCE OF PROPOSED ACTIVITIES TO TRANSFER OF MEDICAL KNOWLEDGE AND TECHNOLOGY

This project will deal with several problems within the Bulgarian Medical Care System which contribute to high cardiovascular morbidity and mortality in Bulgaria, including:

- Delays in diagnosing and treating patients with myocardial infarction and rheumatic fever;
- Limited post-graduate educational opportunities for physicians, nurses and ancillary medical staff who have cardiac patient-care responsibilities; and
- The lack of knowledge among the public about the high risk factors associated with cardiovascular diseases.

To address these problems, the medical staff of Sparrow Hospital, a tertiary care teaching hospital, its Institute of Cardiovascular Diseases (ICD) and Michigan State University's College of Human Medicine, will assist the Second National Centre for Cardiovascular Diseases to expand its training and operational capabilities in the management of cardiovascular diseases through:

- a. The establishment of an exchange study tour program to permit Bulgarian and U.S. staff to visit each other's facilities. These short-term participant training visits will be for a limited number of cardiologists, cardiac surgeons, and ICU/CCU nurses. These exchanges will stimulate the flow of technical knowledge in the management of patients with cardiovascular diseases.

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Sparrow Hospital's ICD has a full range of cardiac services including a Cardiopulmonary Unit, In-Patient Coronary Care Unit and a Cardiac Catheterization Library. Physicians and nurses from these units are familiar with the latest developments in cardiac diagnostic and treatment methods practiced in the U.S. Sparrow Hospital's ICD is approximately the same relative size as Bulgaria's SNCCD so that there will be comparability between the two institutions.

- b. The preparation of patient care protocols for the management of patients with various types of heart disease (e.g., IHD, rheumatic heart disease).

The staff of Sparrow's ICD utilize treatment protocols which have been prepared by the staff in keeping with standards promulgated throughout the U.S. They are familiar with the process of protocol development and recognize the importance of obtaining input from a variety of medical sources.

- c. The development of guidelines for the establishment and administration of intensive care units, ICUs, and cardiac care units, CCUs, in secondary and tertiary care hospitals.

The head nurse of the Institute of Cardiovascular Diseases' In-Patient Coronary Care Unit will be involved in explaining the operations of their unit to the Bulgarian counterpart nurses. We believe that this may be one of the most valuable aspects of technology transfer in this project, because of the lack of training opportunities for Bulgarian nurses.

- d. The development of a continuing medical education program for the professional staff of the SNCCD. This training will focus on enhancing the skills of cardiologists, cardiac surgeons, nurses and ancillary staff.

The staff of the Department of Continuing Medical Education of MSU's School of Human Medicine have designed and conducted many CME programs for health professionals. They have trained CME instructors and will utilize and impart these skills to the Bulgarian nurse educators who will participate in this program.

- e. Based on the training program created for the staff of the SNCCD, a CME program will be established to upgrade the diagnostic and therapeutic skills of general practitioners, specialists, nurses and ancillary staff in 20 general hospitals located throughout Bulgaria. These will include the cities of Karzoli, Hashoko, Smoljean, Blav Goegrad, Petru, Kjustevdez, Vidin, Vraca, Pilven, Zargoviste, Ruse, Rograd, and Silistia.

Each of the 20 hospitals has between 250 and 500 beds, and a staff of cardiologists, internists, general surgeons, vascular surgeons, neurologists, pediatricians and ob/gyn specialists. Some have intensive care units (ICU) and cardiac care units

(CCU) but none have catheterization or thoracic surgery capability (and none is planned under this project).

The purpose of the training will be to improve physician motivation, promote early diagnosis and treatment, and emphasize more comprehensive patient management. The training materials will consist of articles, books, seminars, conferences and video presentations which are used at Sparrow Hospital. Much of the material will be based on existing U.S. educational aids, and some have been developed by the staff of Sparrow Hospital. A good percentage of Bulgarian physicians have a reading comprehension of English, but some of the material will have to be translated into Bulgarian for use by nurses and patients. We also plan to use U.S. training tapes with dubbed Bulgarian voices.

Some of the subjects to be covered in the CME training will include:

- The patient management protocols which will be developed by the project;
- How to plan and manage intensive care and cardiac care units;
- The identification of high-risk factors for cardiac disease;
- Rehabilitation of chronic cardiac patients; and
- Indications for referral of cardiac patients.

Certificates will be given to participants to recognize their participation in the training.

- f. The provision of a selected amount of basic equipment for intensive care/diagnostic care facilities, including such equipment as echocardiographs, treadmills, and inexpensive laboratory apparatuses for measuring blood cholesterol and serum lipids.

The type of equipment to be purchased will be determined jointly by the Bulgarian and U.S. counterparts. All participants understand that the purpose of this project is to provide training, not commodities. Thus, only a fraction of the budget will be allocated to equipment purchases. MSCI will be responsible for developing specifications for the equipment, based on the determination of the types of equipment needed by the Bulgarian and U.S. participants. MSCI will procure the equipment according to U.S. government Federal Acquisition Regulations, and will ship, clear customs, and install it in Bulgaria.

g. **The initiation of a dialogue with the Ministry of Public Health and other Bulgarian government agencies regarding a nationwide public awareness efforts to increase people's knowledge about heart disease and its prevention. In addition, the project will:**

- **Encourage general practitioners to discuss cardiovascular risks with patients; and**
- **Develop and distribute educational brochures to cardiac patients in hospitals and out-patient clinics.**

Because the etiology of CVD is multifactorial, it is logical to use multiple public health interventions to try to obtain the greatest reduction in risk. Risk reduction interventions can be fairly expensive, however, and the project's collaborating institutions recognize that the Bulgarian Government does not have resources to commit to an extensive public education effort. Therefore, the emphasis will be on using community awareness programs such as those used at Sparrow Hospital.

Nevertheless, the impressive decrease in mortality from CVD in the United States and Western Europe in the past 20 years is convincing evidence of the success of health intervention programs using the multifactorial approach. Given the need for public education programs, but recognizing the nation's limited resources, the staff of the SNCCD, Sparrow Hospital, and the MSU Department of Continuing Medical Education will begin a dialogue with officials in the Ministry of Public Health regarding the process of designing a public awareness program about heart disease risks.

**AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IMPLEMENTATION ORDER/TECHNICAL SERVICES (PIO/T) 1183736**

Cooperating Country: ENE Regional (Bulgaria)	2. PIO/T No. 180-0037-3-1183736	3. PIO/T Amend No.
4. Project/Activity No. and Title 180-0037 PARTNERSHIPS IN HEALTH CARE	5. Appropriation Symbol(s) 72-11X1010 (184-63-180-01-69-11)	
	6. Budget Plan Code(s) QAIX-91-33180-IG-12	
7. Pro Ag No. or Project Authorization/Date Proj. Authorization dated 5/15/91	8. Obligation Status <input checked="" type="checkbox"/> Administrative Reservation <input type="checkbox"/> Implementing Document	
9. Project Assistance Completion Date (Month, Day, Year) 12/31/95	10. Authorized Agent MS/CP/OS/EE	
11. Type of Action and Governing A.I.D. Handbook:		12. Contract/Grant/Cooperative Agreement/PASA/RSSA Reference Number (if this PIO/T is for an order or a modification to an award)
<input type="checkbox"/> A. A.I.D. Contract (HS 14) <input type="checkbox"/> B. A.I.D. Grant or Cooperative Agreement (HS 13)		
<input checked="" type="checkbox"/> C. PASAIRSSA (I-B 12) <input type="checkbox"/> D. Other		

13. A.I.D. Funding (Attach a detailed budget in support of column (2) as Attachment A.)

	(1) Previous Total	(2) Increase	(3) Decrease	(4) Total to Date
A. Dollars	-0-	801,000		801,000
B. U.S.-Owned Local Currency				

14. Mission References

15. Instructions to Authorized Agent MS/CP/OS/EE is requested to execute a grant with Medical Service Corporation International (MSCI) to carry out the program described in Attachment 1. This PIO/T provides incremental funding for a total estimated grant of \$2,421,612. Additional resources will be provided in subsequent fiscal years, subject to the availability of funds. Attachment 2 provides the total estimated grant budget, and the budget for this PIO/T.

16. Address of Voucher Paying Office Agency for International Development, Office of Financial Management, FA/FM/OMPD/DC, Room 700, S -02, Washington, DC 20523-0209

17. Clearances - include typed name, office symbol, and date for all clearances.

A. The Project Officer certifies (1) that the specifications in the statement of work or program description are technically adequate, and (2) that (for contract actions only) all program personnel who are defined as procurement officials under 41 U.S.C. 423 have signed the Procurement Integrity Certification (OF-333).

ENE/DR/HPN, J Terry
Signature: *J. L. Terry* Date: 8/27/91 Phone No: 647-8694

B. The statement of work or program description lies within the purview of the initiating office and approved agency programs.

ENE/DR, K Schwartz
Signature: *K. Schwartz* Date: 27 Aug 91

C. ENE/RME, RNachtrieb
ENE/DR/HPN, J Norris
Signature: *Jerry Norris* Date: 8/22/91

D. Funds for the services requested are available:

EM/A/ENP, R Anderson
Signature: _____ Date: _____

E. ENE/RME, TMahoney
ENE/DP/F, MCrawford
Signature: *MPC* Date: 8/29/91

18. For the Cooperating Country: The terms and conditions set forth herein are hereby agreed to:

Signature: _____ Title: _____ Date: _____

19. For the Agency for International Development:

Signature: *Thom Anthony* Title: Director, ENE/DR Date: 8/30/91

FOR CONTRACT ACTIONS ONLY: SOURCE SELECTION INFORMATION--SEE FAR 3.104. THIS DOCUMENT, OR PORTIONS THEREOF, CONTAINS PROPRIETARY OR SOURCE SELECTION INFORMATION RELATED TO THE CONDUCT OF A FEDERAL AGENCY ACQUISITION. THE DISCLOSURE OF WHICH IS RESTRICTED BY LAW (41 U.S.C. 423). UNAUTHORIZED DISCLOSURE OF THIS INFORMATION MAY SUBJECT BOTH THE DISCLOSER AND RECIPIENT TO CONTRACTUAL, CIVIL, AND/OR CRIMINAL PENALTIES AS PROVIDED BY LAW.

FOR OTHER ACTIONS: UNAUTHORIZED DISCLOSURE OF PROPRIETARY OR SOURCE SELECTION INFORMATION MAY SUBJECT AN EMPLOYEE TO DISCIPLINARY ACTION.

Initials: _____
Date Posted: 8/30/91

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