

INTERINSTITUTIONAL AGREEMENT FOR THE DEVELOPMENT  
OF A NATIONAL EMERGENCY MEDICAL SYSTEM  
IN COSTA RICA

SAN JOSE, COSTA RICA

JULY, 1987

We, la Comision Nacional de Emergencias (The National Emergency Commission), represented by Dr. Manuel Aguilar Bonilla, President; el Ministerio de Salud (The Ministry of Health), represented by Dr. Edgar Mohs Villalta, Minister; la Caja Costarricense de Seguro Social (The Costa Rican Social Security Agency), represented by Dr. Guido Miranda Gutierrez, Executive President; la Universidad de Costa Rica (The University of Costa Rica), represented by Dr. Fernando Duran Ayanegui, Chancellor; la Cruz Roja Costarricense (The Costa Rican Red Cross), represented by Mr. Miguel Carmona Jimenez, President; el Colegio de Medicos y Cirujanos de Costa Rica (The College of Physicians and Surgeons), represented by Dr. Juan R. Arce Villalobos, President; and The People-to-People Health Foundation, Inc. (Project HOPE), represented by Dr. Donald Kaminsky, Vice-president, International Division; and Dr. Oscar Arias Sanchez, President of the Republic of Costa Rica in this cooperative action agree to implement and develop a National Emergency Medical System (SiNEM) in Costa Rica, that can serve as a model for Latin America.

## TABLE OF CONTENTS

I)	INTRODUCTION .....	4
II)	SYSTEM COMPONENTS .....	4
	Delivery of Medical Care	
	Education	
III)	OBJECTIVES .....	5
	General	
	Specific	
IV)	SYSTEM ELEMENTS .....	7
V)	PROGRAM COORDINATING COMMITTEE FOR THE DEVELOPMENT OF THE NATIONAL EMERGENCY MEDICAL SYSTEM .....	10
VI)	CONTRIBUTIONS AND RESPONSIBILITIES OF EACH INSTITUTION	
	NATIONAL EMERGENCY COMMISSION .....	11
	MINISTRY OF HEALTH .....	11
	COSTA RICAN SOCIAL SECURITY AGENCY .....	13
	UNIVERSITY OF COSTA RICA .....	17
	COLLEGE OF PHYSICIANS AND SURGEONS .....	21
	COSTA RICAN RED CROSS .....	22
	PROJECT HOPE .....	24
VII)	LENGTH OF THE AGREEMENT .....	25
	ADDENDUM 1: INSTITUTIONAL COORDINATORS .....	27
	ADDENDUM 2: THE NEW CURRICULA .....	28

## I) INTRODUCTION

The creation of an Emergency Medical System constitutes a response to the need for emergency medical care in Costa Rica. This need is reflected in the mortality and morbidity profile of the country in which cardiopulmonary emergencies, and trauma and its consequences occupy the most prominent places.

This Program is expected to raise existing organizations and equipment to an optimal level of function to positively impact the care rendered for the principal causes of medical emergencies.

## II) SYSTEM COMPONENTS

### Delivery of Medical Care

Emergency Medical care will be delivered through the integration of the pre-hospital ambulance system of the Costa Rican Red Cross, and the in-hospital emergency services of the Costa Rican Social Security Agency, tied together by a Communications Network. This will bring about a more efficacious handling of medical emergencies.

### Education

This component includes the preparation of personnel of different

levels to operate the system, and the creation of mechanisms to maintain personnel with up to date knowledge. It contemplates educational programs oriented towards the community to prepare an active and informed public that can act in the face of emergency situations. It also integrates the elements necessary for the development of the qualified human resources needed to operate the system.

### III) OBJECTIVES

#### General Objective

To develop a self-sufficient National Emergency Medical System that will provide a permanent, 24 hour service, seven days a week, to the Costa Rican people.

This system will be designed to attend to the normal daily emergencies of the country, and to have the ability to function during disasters.

#### Specific Objectives

1. To improve the quality of emergency medical care at the pre-hospital level and in the hospital Emergency Departments:
  - a) To provide a rapid coordinated response appropriate for

each medical emergency.

- b) To provide more efficient transportation to the Emergency Department, with the provision of emergency medical care during the transport.
- c) Application of life saving therapeutic interventions at the pre-hospital level that permits the patient to arrive at the emergency room in the best possible condition.
- d) Development of therapeutic and administrative protocols and skills in the Emergency Departments for the specialized care of the most common emergencies.

2. Endow the country with the qualified human resources necessary for the optimal operation of the system through:

- a) Training of the existing personnel in the emergency departments and in the different units of the Red Cross.
- b) Training of human resources for pre-hospital care.
- c) Long-term skills maintenance of personnel with up to date knowledge through continuing education programs.

3. Sensitize and educate the community so they will know how to appropriately activate the system and what to do until specialized help arrives.
4. Develop the mechanisms necessary to guarantee the continuity, maintenance and self-sufficiency of the system.
5. Establish a National Emergency Medical System in the country with the capability to respond to national or regional disasters.

#### IV) SYSTEM ELEMENTS

Given the integrated and interdependent character of the system, the National Emergency Medical System must consist of various elements that function in a coordinated manner. These elements are:

##### 1. Qualified Human Resources:

Provision of available trained personnel in sufficient number to guarantee access to the system 24 hours a day, seven days a week.

2. Integration of Educational Institutions into the System:

Organization of education and training programs for the different levels of personnel who will participate in the delivery of emergency medical care.

3. Integrated Communications Network:

Implementation of a communications network with a single access number for the public, a communications center to coordinate the different public services, and channels of communications between ambulances and hospitals.

4. Patient Transportation Services:

Provision of transport units with the capability to provide basic and advanced life support.

5. Medical Care Services:

Establishment of specialized areas in clinics and hospitals with facilities for the care of medical emergencies.

6. Intensive Care Units:

Establishment of intensive care units in hospitals for the specialized care of critically ill patients.

7. Integration of Public Service Institutions into the System:

Integration of all pertinent public service institutions into the National Emergency Medical System.



8. Active Community Participation:

Development of a sensitive, informed, and educated community able to confront emergency situations appropriately.

9. Accessibility to the System:

Guaranteed access to the System for every person regardless of nationality, medical condition, and social or economic situation.

10. Medical Records and Standardized Statistics:

Standardized system of medical records for the care of emergency patients and a system for statistical information.

11. Interinstitutional Transport of Patients:

Availability of services to transport patients between different health institutions as required by their different medical needs.

12. Control and Evaluation Mechanisms:

System of follow-up and evaluation of the efficacy and efficiency of the National Emergency Medical System.

13. Plan for the Integration of the Medical Component in Disaster Situations:

Capability of the System to respond during disasters.

14. Cooperative Agreements:

Development of agreements between the various health institutions and public service institutions to cooperatively deal with emergency situations.

15. Medical and Administrative Scientific Research:

Design of programs for scientific research of the medical and administrative aspects of the System, with the capability to disseminate this information in an appropriate manner.

These elements will be developed by the various institutions participating in the Agreement as described in this document.

V) PROGRAM COORDINATING COMMITTEE FOR THE DEVELOPMENT OF A NATIONAL EMERGENCY MEDICAL SYSTEM

1. A Program Coordinating Committee will be created. This Committee will be composed of the various institutional coordinators (Addendum 1) and will be chaired by the Representative of the National Emergency Commission.
2. The functions of this Committee will be:
  - a) General coordination of the Program.

- b) Present a biannual report to the National Emergency Commission concerning the progress and plans of the Program.
- c) Present to the National Emergency Commission the requests for the expenditure of the 45,000.000 colones that the Commission will contribute to the Program.
- d) Coordinate with the School of Medicine of The University of Costa Rica, the Costa Rican Social Security Agency, the Costa Rican Red Cross, and other national and international institutions, so that students who graduate from the Emergency Medical Technician (EMT) and Paramedic courses will be employed by these institutions.
- e) All other functions established in this Agreement.

#### VI) CONTRIBUTIONS AND RESPONSIBILITIES OF EACH INSTITUTION

##### NATIONAL EMERGENCY COMMISSION

##### Responsibilities:

1. The National Emergency Commission will be responsible for the development and administration of the Program to

establish a National Emergency Medical System in Costa Rica.

2. Revision and evaluation in detail, of the organization, operation, and progress of the Program, no less than every six months.

Contributions:

1. Forty five million colones, in rapidly available funds to be used to complement the contributions of the other participating institutions for the development of the System.
2. The Commission will design a National Disaster Plan and will define the functions of the National Emergency Medical System within this Plan.
3. Creation of a communication center, with a single access number for the public that will integrate the different existing communication networks and will coordinate the different public services. The center will function 24 hours a day, seven days a week and will integrate pre-hospital care and hospital emergency care.
4. The Commission will establish the necessary accounting and audit mechanisms for the control of the Program.

5. Initially, the Commission will lend two four-wheel drive vehicles for exclusive use by the Program. The necessary insurance and maintenance, not including fuel, will be provided by the Commission. In addition, the Commission will assign the personnel necessary to operate the vehicles.

#### MINISTRY OF HEALTH

The Ministry of Health will offer total support to the Program for the development of the National Emergency Medical System, as described in this document, and will cooperate in all respects as required. The Ministry also will be responsible for maintaining the statistics of the System. These statistics will be provided biannually by the Program Coordinating Committee.

#### COSTA RICAN SOCIAL SECURITY AGENCY

##### Educational Component:

NATIONAL CENTER FOR TEACHING AND RESEARCH IN HEALTH AND  
SOCIAL SECURITY (CENDEISSS)

##### Responsibilities:

1. CENDEISSS, together with the School of Medicine, through the Section of Medical Technologies and Project HOPE, will be responsible for the design of the plans of study for all

personnel. These courses will include the following levels:

- Assistant in Basic First Aid (APA Basico)
- First Responder (APA Avanzado)
- Advanced Life Support
- EMT (Asistente de Emergencias Medicas)
- Paramedic (Tecnico en Emergencias Medicas)

(The description of these courses is detailed in Addendum 2). These courses will be approved by the Program Coordinating Committee and by the School of Medicine of the University of Costa Rica. Priority will be given in these courses to the preparation of instructors who can teach their respective courses.

2. CENDEISSS will be responsible for teaching the continuing education courses for practicing physicians, nurses, and technicians, utilizing the pertinent study plans. These courses will include Advanced Life Support, and any other that may be organized in the future.
3. The elaboration and periodic revision of the manuals and didactic materials for the different courses in the Program, to be done jointly with the School of Medicine of the University of Costa Rica and Project HOPE.
4. Collaborate in the training of personnel who will function in the National Emergency Medical System at the levels of

first responder, EMT, and paramedic.

5. Co-sign, together with the University of Costa Rica and the College of Physicians and Surgeons, the certificates that will be granted to the graduates of the courses for advanced life support, the assistant in basic first aid, and the first responder.
6. CENDEISSS will present a detailed biannual report to the Program Coordinating Committee concerning the operation, progress, and plans of its part in the National Emergency Medical Program.
7. Develop, jointly with the School of Medicine of the University of Costa Rica, continuing education programs for the general public utilizing the mass communication media (radio, television, etc). The purpose of these continuing education programs is to educate the community so they know how to appropriately activate the system and what to do until specialized assistance arrives at the site of an emergency.

#### Contributions:

1. Office space and equipment for the administrative center of the program.

2. Three persons assigned to work in the administrative center: a bilingual secretary, a translator, and an administrator.
3. A van, with driver, for the exclusive use of the program.
4. All customs applications and procedures for equipment contributed from the United States and payment of the cost of transportation from Miami to Costa Rica.
5. Payment of housing for the short-term personnel of Project HOPE who are assigned to this Program.
6. The equivalent in local currency of US\$250 per month for each of the long-term personnel of Project HOPE who are assigned to this Program.
7. Permission for physicians, nurses, and technicians to receive the continuing education courses, and later to serve as instructors.
8. Printing of manuals and teaching materials.

#### Delivery of Medical Care Component

1. The Costa Rican Social Security Agency will facilitate the Emergency Departments of the national hospitals (Mexico Hospital, National Children's Hospital, Calderon Guardia



Hospital, San Juan de Dios Hospital), and the Hospital San Rafael de Alajuela becoming referral and teaching centers in the National Emergency Medical System.

2. The chiefs of the Emergency Departments will have the authority and necessary resources to develop these centers as model academic and service centers for the management of medical emergencies.
3. The physicians in the Emergency Departments will be responsible to coordinate the management of pre-hospital patients.
4. The Costa Rican Social Security Agency will record and process all statistical information pertinent to the National Emergency Medical System and will present a detailed biannual report to the Program Coordinating Committee concerning operations, progress and plans.

#### UNIVERSITY OF COSTA RICA - SCHOOL OF MEDICINE

##### Responsibilities:

1. The School of Medicine, through the Medical Technologies Section, and jointly with CENDEISSS and Project HOPE, will be responsible for the design of the plans for all the

courses to be taught, for the training of personnel, as well as all continuing education courses, and for their official approval. These courses will include the following levels:

- Assistant in Basic First Aid (APA Basico)
- First Responder (APA Avanzado)
- Advanced Life Support
- EMT (Asistente de Emergencias Medicas)
- Paramedic (Tecnico en Emergencias Medicas)

(The description of these courses is detailed in Addendum 2). Priority will be given in these courses to the preparation of instructors who can teach their respective courses.

2. Preparation and periodic revision, jointly with CENDEISSS and Project HOPE, of the manuals and didactic material for the different courses in the Program.
3. The selection of students for the courses of EMTs and Paramedics in accordance with the established policies and procedures of the University.
4. The School of Medicine, in coordination with the College of Physicians and Surgeons, will define the scope of practice for the Paramedics.

5. The University of Costa Rica will be responsible to extend the certificates of approval for the different courses. The University will also co-sign, with CENDEISSS and the College of Physicians and Surgeons of Costa Rica, the certificates of successful completion of the courses for the assistant in basic first aid, the first responder, and the advanced life support courses.
6. The School of Medicine will grant a diploma (associate in arts degree) to the Paramedics.
7. The School of Medicine will teach courses that are pertinent to the care of medical emergencies to all the medical students.
8. The University will conduct research and social action plans to support the education and training of personnel to handle medical emergencies, including a demand study to determine the number of Paramedics that is appropriate for Costa Rica.
9. The University of Costa Rica will present a detailed biannual report to the Program Coordinating Committee concerning the operation, progress and plans as these relate to the National Emergency Medical Program.

programs for the general public, utilizing the mass communication medias (radio, television, etc.) for the purpose of educating the community to know how to activate appropriately the emergency system and what to do until specialized assistance arrives at the scene of an emergency.

Contributions:

1. The University will grant the title of honorary professor to both long-term and short-term faculty members of Project HOPE so they will have teaching privileges within the University system.
2. The University will appoint no less than four half-time instructors and professors, for theory and laboratory, for the teaching programs.
3. The School of Medicine of the University of Costa Rica will provide the physical plant for office, laboratory, and classrooms, as well as office equipment and materials, secretarial personnel, and laboratory personnel.
4. The University will grant up to 200 scholarships to the Costa Rican Red Cross Personnel who take the course for EMT's during the three year period contemplated in this Agreement.

COLLEGE OF PHYSICIANS AND SURGEONS

1. The College of Physicians and Surgeons will give its full support to the program for the development of a National Emergency Medical System.
2. Jointly with the School of Medicine of the University of Costa Rica, the College will develop the program for Paramedics. The College will approve the scope of practice of Paramedics and will process their registration within the College of Physicians and Surgeons. Any future change in this Program or in the scope of practice will require previous approval by the College.
3. The President of the College of Physicians and Surgeons, or his/her designee, will co-sign jointly with the University of Costa Rica and CENDEISSS, the certificates awarded to the graduates of the following courses:
  - Assistant in basic first aid
  - First responder
  - Advanced life support.

THE COSTA RICAN RED CROSS

## Responsibilities:

1. The Costa Rican Red Cross will continue to provide ambulance service to the total Costa Rican population.
2. The Red Cross will be responsible for teaching the courses for assistants in basic and advanced first aid (APA basico and Avanzado), under the guidance and supervision of the School of Medicine of the University of Costa Rica.
3. Equip its ambulances with the equipment necessary to provide pre-hospital care consistent with the new level of training of its emergency personnel.
4. Provide a detailed biannual report to the Program Coordinating Committee concerning the operation, progress, and plans as these relate to the National Emergency Medical System.
5. Compile all information corresponding to the pre-hospital part of the System and report this information to the Costa Rican Social Security Agency for proper processing.

Contributions:

1. The Costa Rican Red Cross will permit 200 of its ambulance personnel to take the EMT course during the next three years.
2. Provide 26 selected members of its ambulance personnel to enroll in a full time special intensive course for EMTs to be initiated in February, 1988. The most distinguished graduates of this course will be selected to serve as future instructors in EMT courses.
3. The Red Cross will require all personnel, hired in the future, who provide emergency care, to have completed the EMT or Paramedic courses. Volunteers will be required to have taken the basic first aid or first responder courses.
4. The Red Cross will lend two ambulances to the Program to be equipped by Project HOPE as models for teaching EMTs and Paramedics. The Red Cross will also provide the insurance, maintenance, and fuel for these ambulances. These vehicles will be operated for routine service by instructors of the Program who will precept students.

PROJECT HOPE

## Responsibilities:

1. Project HOPE will function as a facilitator, catalyst, and advisor for the organization and development of the National Emergency Medical System.
2. Project HOPE will prepare Costa Rican instructors and administrators so they are qualified to operate the system in a complete, efficient, and autonomous manner by the end of the Program.
3. Participate in the development of the study plans for the different courses, as well as in the preparation of the necessary didactic material.

## Contributions:

1. Project HOPE will provide qualified personnel to assist with the development of the Program, and with the salaries, transportation expenses and other personal costs of long-term personnel.
2. Provide the necessary equipment to initiate the teaching laboratories and to equip the two model ambulances lent by the Costa Rican Red Cross.



3. Project HOPE will participate with an estimated contribution of US\$1,200,000 in the form of personnel, equipment, administration and donations for the Program to develop a National Emergency Medical System. This includes the amount contributed by the Agency for International Development of the Government of the United States of America (USAID) through an agreement entered into by Project HOPE and USAID.
4. Advise and collaborate with the National Emergency Commission in the design and implementation of a communications center to permit the proper functioning of the National Emergency Medical System.

#### VII) LENGTH OF THE AGREEMENT

This Agreement will be in force for a period of three years. Prior to the end of this Agreement the parties will agree upon the mechanisms necessary for the permanent operation of the System.

Signed in San Jose, Costa Rica, the thirtieth day of July of  
nineteen hundred and eighty seven.

Dr. Edgar Mohs Villalta  
Minister of Health

Dr. Manuel Aguilar Bonilla  
President, National Emergency  
Commission

Dr. Guido Miranda Gutierrez  
Executive President, Costa  
Rican Social Security Fund

Dr. Fernando Duran Ayanegui  
President, University of  
Costa Rica

Dr. Juan R. Arce Villalobos  
President, College of  
Physicians and Surgeons

Sr. Miguel Carmona Jimenez  
President, Costa Rican  
Red Cross

Dr. Donald G. Kaminsky  
Vice-President, International Division  
The People-to-People Health Foundation, Inc  
(Project HOPE)

Dr. Oscar Arias Sanchez  
President of the Republic

## ADDENDUM 1

PROGRAM COORDINATING COMMITTEE FOR THE DEVELOPMENT OF A  
NATIONAL EMERGENCY MEDICAL SYSTEM

The parties to this Agreement designate the following institutional coordinators to form the Program Coordinating Committee:

## National Emergency Commission:

Dr. Guillermo G. Rodriguez Gomez,  
Commission Member

## Costa Rican Social Security Agency

## Educational Component:

Dr. Guido Alvarez Cabezas,  
Director, CENDEISS

## Delivery of Medical Care Component:

Dr. Edgar Cabezas Solera,  
Medical Manager, Costa Rican Social  
Security Agency

## University of Costa Rica:

Dr. Rolando Cruz Gutierrez,  
Director, School of Medicine

## College of Physicians and Surgeons:

Dr. Juan Arce Villalobos,  
President

## Costa Rican Red Cross:

Dr. Eduardo Acosta Nasser,  
Medical Director

## Project HOPE:

Dr. R. Scott Altman,  
Program Director

In case of substitution of a coordinator, the respective institution will communicate in writing to all parties the name of its new coordinator.

## ADDENDUM 2

NEW CURRICULA FOR THE TRAINING OF PERSONNEL TO BE PREPARED  
FOR THE NATIONAL EMERGENCY MEDICAL SYSTEM1. Assistant in Basic First Aid (ABA Basico)

**Participants:** This course will be designed for the general public, including high school students, house wives, etc.

**Length:** The approximate length of each course will be eight hours.

**Content:** This course includes the basic elements of one person cardiopulmonary resuscitation, management of upper airway obstruction, bandaging, burns, c-spine immobilization, poisonings, and sprains. This course will place emphasis on how and when to activate the National Emergency Medical System and on what to do until specialized assistance arrives. It also will contain basic information about the steps to take in case of disasters such as earthquakes, floods, fires, etc.

## 2. First Responder (APA Avanzado)

**Participants:** This course is designed for health professionals (physicians, dentists, pharmacists, nurses, etc.) and for selected groups of the general public such as policemen, firemen, etc.

**Length:** The approximate length of each course will be 40 hours.

**Content:** This course includes the principles of 2 person cardiopulmonary resuscitation (for adults, children, and infants), management of upper airway obstruction, burns, bandaging, immobilization of fractures, c-spine immobilization, basic elements in the care of poisonings, childbirth, hypoglycemia, convulsions, heat exhaustion, and sprains. It also will contain information about the steps to take in case of disasters such as earthquakes, floods, fires, etc., as well as the initial response of the system during times of disaster.

### 3. Advanced Life Support

**Participants:** This course will be designed for physicians, nurses, and Paramedics who have skills in basic EKG interpretation and basic cardiopulmonary anatomy, physiology and pharmacology. The standards of evaluation will be different for physicians and non-physicians.

**Length:** Approximately 32 hours.

**Content:** Techniques of advanced cardiopulmonary and trauma life support. Includes management of cardiorespiratory failure; airway and shock; head, thoracic and abdominal trauma; spine and spinal cord injury; burns, trauma during pregnancy and techniques for stabilization and transport.

#### 4. Emergency Medical Technician

**Participants:** This course is designed for ambulance personnel who possess a minimum of a high school education.

**Length:** Approximately 160 hours.

**Content:** This course will include training in the pre-hospital management of: airways; cardiorespiratory failure; hemorrhage and shock; wounds and bandaging; fractures and dislocations; head and neck injuries; myocardial infarct and stroke; asthma and chronic obstructive pulmonary disease; epilepsy and convulsions; poisonings; diabetic coma; childbirth; extraction; immobilization, lifting, and transport of patients; and ambulance operation.

EMT will have roles and responsibilities similar to those actually performed now by the Red Cross assistants, but with a higher level of knowledge that will permit better coordination within the System.

The physicians in the Emergency Departments,

5. Paramedic

(To be developed during the first two years)

**Participants:** This course will be designed for selected students who have satisfactorily completed the course for EMT emergencies.

**Length:** The course is programed for five full time university cycles.

**Content:** This course will include techniques of pre-hospital advanced life support, with emphasis on the management of upper airway problems, advanced cardiopulmonary support, and advanced trauma support at the pre-hospital level.

The Paramedic will act as an extension of the hospital Emergency Department under the direct supervision and direction of a physician. The application of therapeutic measures will be subject to a physician's prescription. The College of Physicians and Surgeons will formally approve the scope of practice of these Paramedics before the start of the first course.