



*executive committee of  
the directing council*

PAN AMERICAN  
HEALTH  
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WORLD  
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70th Meeting  
Washington, D.C.  
July-August 1973

Provisional Agenda Item 19

CE70/14 (Eng.)  
11 June 1973  
ORIGINAL: SPANISH

REGIONAL ASSISTANCE FOR THE REHABILITATION OF THE HEALTH SYSTEM OF NICARAGUA

On 23 December 1972 the city of Managua, with an estimated population of 417,000 inhabitants, was struck by a major earthquake which caused the destruction, in whole or in part, of almost two-thirds of the buildings in the city; between 4,000 and 6,000 deaths; approximately 20,000 injured; the complete or partial destruction of the headquarter offices of the government, economic and social sectors; and major damage to public services (water, light, telephones, schools, hospitals, etc.).

Since the very heart of the country, where a high proportion of the administrative, economic and commercial activities were concentrated, had been affected, the situation that had to be faced took on dramatic proportions from the first moments of the confusion caused by the leading element of national activity, namely the capital of the Republic, having been disorganized and rendered useless.

Within a few hours after the catastrophe, the Government of Nicaragua set up a National Emergency Committee under the chairmanship of the Chief of the Armed Forces, His Excellency General Anastasio Somoza Debayle, and composed of the ministers of state, directors of autonomous agencies, the army, the statistical department, chambers of construction, industry and commerce, the Red Cross, etc. At the same time, committees responsible for specific activities such as public works, health, water, light, education, etc., were set up.

International assistance was immediately received both from the governments of almost all the countries in the Americas and from other regions of the world, individually, as well as from international organizations: the United Nations and its specialized agencies, the Organization of American States, the international banks, the Red Cross, etc.

Situation in the Health Sector and Assistance Provided by PAHO/WHO and Other Organizations and Governments

The destruction suffered by the Health Sector included the destruction of all hospital beds, amounting to 1,250; of almost all the health centers, polyclinics and subcenters. Only the Western Polyclinic of the INS and a day nursery were still usable.

From the forenoon of 23 December onwards the activities of various institutions in the Health Sector were coordinated for the following purposes: a) to arrange for medical and paramedical personnel to work in emergency stations; b) to organize emergency medical care centers in Managua; c) to prepare the hospitals in the interior of the country to receive the wounded; d) to refer injured persons requiring treatment to hospitals in the Departments of Carazo, Masaya, Granada, etc. (the most seriously injured were sent to hospitals in Mexico and other Central American countries that offered their services); and e) to organize medical assistance offered by various countries. The distribution of this assistance was as follows: 1) emergency hospital of the United States Army based in Panama (24 beds); 2) G-1 Army Hospital of Houston, Texas at El Retiro Ranch; 3) physicians from Peru and England at the Masaya Hospital; 4) physicians from Chile at the INS Day Nursery; 5) physicians from France in the courtyards of the Instituto Maestro Gabriel; 6) physicians from Cuba in the Maximo Jerez residential district (50-bed hospital); 7) physicians from Costa Rica and Venezuela at the Jinotepe Hospital; 8) physicians from Honduras at the Vélez País Hospital; 9) physicians from Guatemala at Las Palmas; and 10) physicians from Mexico at Las Palmas. Vector and rodent control were promptly initiated.

During the first three days ambulatory treatment was given to approximately 6,500 persons and 1,319 persons were hospitalized in the Vélez País Hospital and in the United States Army field hospital; about 1,000 corpses were buried. In addition, an estimated 14,000-15,000 injured persons were treated by various services other than the official services.

Water supply services were in part restored on the sixth day, provision having meanwhile been made for temporary supplies using tank cars. By 13 January all the city had been provided with an efficient water supply. It took more time to restore sewage disposal services; refuse collection services were also re-established.

On 28 December Dr. Abraham Horwitz, Director, Pan American Sanitary Bureau, visited the country together with the Chief of Zone III and the Director of INCAP. During his stay in Managua, Dr. Horwitz discussed assistance activities with Dr. Valle López, the Minister of Health, as well as with the Minister of External Relations, and was provided with a list of medicines and medical equipment needed to assist the victims of the earthquake.

The Organization immediately made available to the national authorities its personnel stationed in the country and other personnel of the Zone Office and of Headquarters, a total of eight staff members, including engineers, medical officers and auxiliaries, and it also provided various equipment, typhus vaccine and rabies vaccine and kept in continuing contact with the Government concerning the future re-establishment of the health services. Fortunately, no epidemic outbreaks occurred.

A staff member of the Zone Office served as coordinator of PAHO/WHO activities in accordance with the instructions of the Director, and the Directing Council of the National Medical Care and Social Welfare Board has appointed that same officer a member of the Planning Committee for the Reconstruction of Health Services.

On the occasion of the 51st session of the WHO Executive Board, and on the basis of a report submitted by Dr. Orontes Avilés of Nicaragua, a member of that Board, Resolution EB51.R43 was adopted, stipulating that the Director General should "launch, through both its headquarters and the Regional Office for the Americas, an appeal to all Member States for voluntary material and financial contributions for:

- a) the construction of a national university hospital; and
- b) the construction of a national health centre to make possible the implementation of the health activities of the centre destroyed by the catastrophe."

That resolution also stipulates that a consultative mission will be sent to Nicaragua, composed of highly qualified persons, to collaborate with the national authorities in preparing a detailed program for the reorganization and restoration of the Health Services of Managua.

This committee visited the country and has issued a report which will be submitted to the Government.

The experience of this disaster, like that of others that occurred in various countries, points up the need for an agency to plan the activities that must be undertaken in cases of emergency and to lay down the responsibilities of each of the national institutions that should be involved in overcoming these emergency situations.

During the period 1965-67, a total of 74 natural disasters and epidemics occurred in Latin America. In 1970 there were 10 disasters including the Peruvian earthquake in May of that year in which 67,616 persons died. It is estimated that a total of 74 million dollars was collected both from national sources and from international agencies to deal with those emergencies. These data, which relate to recent disasters affecting the life of the population and the economy of the countries, give us some idea of the magnitude of the problem.

When national emergencies occur, the Government and other voluntary groups organize themselves in order to coordinate their activities, but a lack of programs, rules, guidelines, inventories of supplies and equipment, and the lack of trained personnel, frequently give rise to confusion, resulting in a waste of effort and resources and limiting activities designed to deal with the emergency.

Consequently, the problem has two aspects: on the one hand, the magnitude of the emergencies in the Region and on the other, the lack of permanent units to deal with them, as well as of plans and permanent staff to provide efficient assistance.

For this reason, PAHO has initiated a program the purpose of which is to assist the countries of the Region in reducing health risks caused by natural disaster to a minimum.

The purposes of this program are to assist the ministries of health in establishing permanent units to deal with the problem, to encourage the preparation of a national emergency plan, in particular for the health sector, and the training of various types of personnel to direct and carry out pertinent activities when disasters occur.

For this purpose, in collaboration with the United Nations Association of the United States, a limited amount of funds has been obtained and will be used for this program.

It is also intended to increase the resources in collaboration with the Inter-American Emergency Fund, of whose Committee the Director of the Pan American Sanitary Bureau is a member.

In December 1972 a seminar was held in Puerto Rico for the countries of the Caribbean area and of Central America concerning preparation for disasters, in particular hurricanes, which are the most frequent natural phenomena affecting this area. This meeting was financed by the OAS, and our Organization provided fellowships for some of the participants as well as technical advisory services.

This year a seminar on earthquakes will be held in collaboration with the OAS for the countries of the Andean area.

The Organization is also sponsoring courses and seminars in collaboration with universities and schools of public health on specific aspects, such as sanitary engineering in emergencies, and will provide countries that request it with advisory services and technical information on the organization of emergency care and first aid services.



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Provisional Agenda Item 19

CE70/14 (Eng.)  
ADDENDUM  
24 July 1973  
ORIGINAL: SPANISH

REGIONAL ASSISTANCE FOR THE REHABILITATION OF THE PUBLIC HEALTH SYSTEM OF  
NICARAGUA

The Director feels it incumbent upon him to report to the Members of the Executive Committee on the measures taken both by Nicaragua and by the international agencies, and more specifically by the World Health Organization and the Pan American Health Organization, for the reconstruction and rehabilitation of the health services of the City of Managua.

Damage Caused by the Earthquake

On 23 December 1972 Managua was struck by a violent earthquake which destroyed a large part of the center of the city, causing very severe material damage to the hospitals and health establishments which served the population of Managua and the country as a whole.

Prior to the earthquake the city had 2,125 hospital beds and seven health centers and polyclinics for ambulatory care. The earthquake destroyed completely and beyond any hope of restoration 1,350 beds, almost all for acute cases, including the 875 beds of the El Retiro Hospital, which was the largest and best equipped in the country, and five health centers.

The hospitals which suffered damage of lesser extent and were able to continue functioning after the earthquake were all specialized establishments; they included the psychiatric hospital and the Vélez Paiz Hospital.

Emergency Organization

The Government of Nicaragua established, within a few hours of the earthquake, a National Emergency Committee under the Chairmanship of the Commander-in-Chief of the Armed Forces, General Anastasio Somoza Debayle, and composed of all the government ministers, the heads of the autonomous agencies, the heads of the armed services, and members representing the

Master Builders' Association, industry, commerce, the Red Cross, etc. At the same time, committees were organized to take charge of specific activities, including a health committee under the chairmanship of Mrs. Hope Portocarrero de Somoza, President of the National Social Welfare Board (JNAPS). This health committee undertook to coordinate the medical assistance offered by foreign countries and to take, through the Ministry of Health, the main preventive measures required to restore drinking water supplies, destroy insects and rodents, vaccinate the population, etc. At the same time hospitals were organized in emergency premises, staffed in general by medical missions from abroad, and urgent steps were taken to put into commission the Vélez Paiz Hospital, with 140 beds for medical and surgical cases, and a tent hospital with a further 140 beds, thus making it possible to give basic medical care to the population and transfer to neighboring towns the most serious cases which required specialized care. It is worth pointing out that all this public health and emergency care work was organized by the national health authorities with the greatest efficiency, thus preventing the development of epidemics and making it possible to give reasonably satisfactory care to the injured.

On 28 December 1972 Dr. Abraham Horwitz, Director of PASB, visited the country and made arrangements for technical assistance to the Government in the reconstruction and rehabilitation of its health services.

#### Resolution of the WHO Executive Board

Early in January 1973 the WHO Executive Board held its 51st Regular Session in Geneva with the participation of the member designated by the Government of Nicaragua, who made an eloquent and moving statement to the Board informing it of the misfortune which this country had recently suffered. Following expressions of solidarity by all the members of the Executive Board, the Board adopted Resolution EB51.R43, paragraph 3 of which "REQUESTS the Director-General:

- (1) to arrange to take early steps to send a high level advisory mission to work out with the Government of Nicaragua a detailed program for the rehabilitation and reconstruction of the health services in Managua;
- (2) to launch, through both its headquarters and the Regional Office for the Americas, an appeal to all Member States for voluntary material and financial contributions for:
  - (a) the construction of a national university hospital; and
  - (b) the construction of a national health center to make possible the implementation of the health activities of the center destroyed by the catastrophe;

(3) to provide the Secretary-General of the United Nations with the necessary data for the inclusion of health assistance in the appeal that the Secretary-General will launch for the overall rehabilitation program for Nicaragua; and

(4) to ensure appropriate coordination of the assistance of WHO with that of other organs of the United Nations system, particularly the United Nations Disaster Relief Office, UNDP, IBRD, UNICEF, as well as the Inter-American Development Bank, and the League of Red Cross Societies and other organizations concerned."

In pursuance of this resolution the Director of PASB, in consultation with the Director-General of WHO, sent to Nicaragua at the end of April 1973 a special mission composed of the following experts:

- (a) Mr. James Stephan, President of Hamilton Associates, Inc., and Professor of Hospital Administration at the University of Minnesota;
- (b) Dr. Ned Wallace, Professor of International Health at the University of Wisconsin;
- (c) Mr. Robert Douglass, Director of the Joint Program on Design of Health Establishments and Health Care Delivery Systems of Rice University and of the Faculty of Public Health of the University of Texas;
- (d) Dr. R. Glyn Thomas, Regional Adviser on Organization of Medical Care, World Health Organization Regional Office for Europe;
- (e) Dr. Alfredo Leonardo Bravo, Chief, Medical Care Services, Pan American Health Organization (Coordinator of the Mission);
- (f) Dr. Henrique Maia Penido, Chief, Zone III, PAHO; and
- (g) Dr. Antonio Delgado, liaison officer for all matters connected with the rehabilitation and reconstruction of health services in Nicaragua.

The terms of reference of the Mission were:

- (a) To review the plans drawn up at the national level for the program of reconstruction;
- (b) To prepare a preliminary design for the general hospital and the health center to be built in Managua;
- (c) To establish an estimate of the cost of these two buildings.

The Mission was guided in the fulfillment of its mandate by the Ten-year Health Plan for the Americas approved by the III Special Meeting of Ministers of Health held in Santiago, Chile, in October 1972, and in accordance with the principles set forth in that plan made the following recommendations:

(a) General Recommendations

(1) The Mission commends the measures already taken by the national government, which have helped to prevent epidemics and made it possible to continue delivery of health services to the population of Managua since the earthquake.

(2) The Mission considers that the building program which is already in course of implementation and which should be completed by 1 July 1974 is satisfactory and will enable the hospital services to be reestablished at the level which existed prior to the earthquake. This program, which is being assisted by AID, includes the construction of two general hospitals, together with the expansion and conversion into a children's hospital of the Vélez Paiz Hospital. The Mission considers that, when these measures have been taken, the emergency phase of the program of reconstruction and rehabilitation can be considered as satisfactorily completed. From now on, the country should prepare itself to keep abreast of the latest scientific and social developments and to organize a modern health service system.

(3) The Mission fully endorses the six points of the "Basic principles for medical care in Nicaragua," contained in the plan approved by the Planning Committee set up by the J.N.A.P.S. in February 1973.

(4) The Mission considers that the new organizational structure approved in principle for the public health sector seems to be a good point of departure for the process of coordination between the Ministry of Health and the J.N.A.P.S. In addition, the Mission understands that the Armed Forces already provide their personnel and dependants with comprehensive health care services.

(b) Overall Planning Recommendations

(1) It is recommended that the primary level of health care shall be the health center, where a single health team will deliver to the community preventive and curative services simultaneously on ambulatory basis. Community health subcenters should be established in the suburban and rural areas as necessary.



(2) It is recommended that community general hospitals support the health activities of the centers and subcenters and that, wherever hospital beds are available, ambulatory care be also provided, if possible in the same building.

(3) It is recommended that, in view of their high cost and consumption of resources, specialized hospitals be reserved exclusively for very densely populated areas at the national or state level, and be involved in training and research activities.

(4) It is recommended that, whenever home conditions allow, domiciliary health services be established.

(5) It is recommended that education and training of health personnel be carried out at all levels of the service.

(c) Specific Recommendations

(1) The Mission considers that the National University Hospital and the National Health Center, which the WHO Executive Board recommends should be built, offer a unique opportunity and may serve a comprehensive purpose if they are merged into one functional unit to form a national institute of health sciences.

(2) Such an Institute would be a powerhouse of original and creative ideas for renovating the health services structure which existed prior to the earthquake and would provide leadership on how to improve standards of care and devise new methods for the delivery of medical care. In addition, it would strengthen the training of health personnel and would undertake applied research aimed at the solution of concrete problems.

(3) It is planned that the Institute should serve in the following capacities:

i. Specialized hospital care and ambulatory medical care center for patients referred to it by other establishments in the health system.

ii. Center of excellence for postgraduate teaching and applied research center for the entire country.

iii. Health information center.

iv. Multi-test laboratory and reference center.

- v. Establishment for training of medical specialists through residency and further education programs for graduates.
  - vi. Establishment for training of nurses.
  - vii. Establishment for training of other health personnel.
- (4) It is recommended that a national committee be established with the primary responsibility of drawing up a program leading to the establishment of the Institute.
- (5) For the expeditious performance of this task, the Committee would need to be empowered to delegate, when necessary, responsibility for supervising the programming, design and construction work.
- (6) In the discharge of its responsibilities, the Committee would be able to call upon the assistance of WHO or PAHO.
- (7) If the Committee begins its work on 1 July 1973 at the latest, it may be expected that the Institute could be opened within the next four years.
- (8) Depending on the program finally approved, the construction costs could range between eight and eleven million dollars.
- (9) It is recommended that land be acquired adjacent to the hospitals that are to be constructed with AID assistance, with a view to their future expansion.
- (10) It is recommended that from the start close attention be paid to training of personnel for the administrative services, for teaching and for direct care services to patients.

In the body of its report, the Mission submits the following timetable for the work of reconstructing and rehabilitating the health services of the City of Managua.

Emergency Phase - from the Date of the Earthquake until 1 June 1974

During this period the medical care services of the City of Managua will be limited to the 200 beds available at the Vélez Paiz Hospital following a small expansion carried out with the help of a loan from AID. The tent hospital which functioned during the early months had to be dismantled in May when the rainy season began. It was partly replaced thanks to the addition of 80 beds to the Vélez Paiz Hospital.

This phase of minimum care services will end on 1 June 1974, when the two new 200-bed community hospitals, both also built with the help of a loan from AID, are put into commission.

At the end of the emergency period, therefore, the City of Managua will have available 680 hospital beds, of which 400 will be reserved for adults and 200 for pediatric care. These hospital beds, added to those in the hospitals for chronic cases which have continued to function, will give the City of Managua a total of 1,375 beds, which is considered a satisfactory minimum for delivering medical care to the city's population.

#### Final Reconstruction Phase - from July 1973 to July 1978

This phase is to begin immediately with the appointment of a national hospital building commission to draw up the program and take the necessary steps for the construction of the National Institute of Health Sciences, which would comprise a 400-bed specialized hospital and a large national health center for ambulatory care, both working in close coordination in order not only to meet the care requirements of the City of Managua, but also to serve as a reference center for the entire national health system of the country and as a center for scientific research and training of specialists through postgraduate residencies and courses. The Mission calculated that these establishments could be completed by July 1977, leaving open the possibility that between that between July 1977 and July 1978 a 180-bed extension could be constructed to each of the two hospitals built by AID and a 110-bed extension to the hospital of the National Institute of Health Sciences. As a result of all these measures, by July 1978 the city would again have attained the total of 2,125 beds which it possessed prior to the earthquake, with the addition of a large ambulatory center and a whole network of peripheral urban and rural health centers which would allow emphasis to be laid on ambulatory in preference to in-patient care. The program nevertheless provides for an adequate number of beds to meet in-patient requirements, taking into account natural population growth.

The Mission considered that, with the establishment of an extensive network of health centers throughout the country plus an ambulatory center for specialized care in Managua, and provided adequate use was made of existing beds and those provided for in the building program, the country's health system should function efficiently, having at its disposal the community medical services at the primary level, the community hospitals at the intermediate level, and a large center for specialized services at the central level. This will, moreover, make it possible to attain the minimum of one hospital discharge to every 10 persons per year and two medical consultations per person per year recommended in the Ten-Year Health Plan.

The report of the Mission was sent by the Director of PASB to the Minister of Public Health of Nicaragua on 23 June 1973 with the covering letter reproduced in the annex to this report.

#### Resolution of the World Health Assembly

The 26th World Health Assembly took note of the resolution of the Executive Board and was informed in broad outline of the contents of the report of the special Mission. The Assembly recommended that, after it had been approved by the Government of Nicaragua, the report of the Mission should be submitted to the Executive Board.

#### Financial Arrangements

As indicated in the report of the Mission, the approximate cost of the project will be between 8 and 10 million dollars, depending on how large a program the Government of Nicaragua decides to undertake.

In order to meet these financial requirements, the Director of PASB has initiated negotiations with the President of the Inter-American Development Bank, who has agreed in principle to a multilateral loan which would be underwritten by various countries without overburdening the credit capacity of Nicaragua and would be reimbursable in 40 years with a period of grace of 10 years and at an annual interest rate of 2%. Only the approval of the report of the Mission by the Government of Nicaragua is now awaited for the final negotiations to be undertaken and this loan to be formally authorized.

Meanwhile, in response to the appeal launched by the WHO Executive Board in January of this year, there have to date been received a financial contribution from the Government of Guinea amounting to \$1,974.75 and the promise of a donation from the Government of Thailand in the amount of \$1,000.00. Both will be placed in a special account for assistance in connection with the earthquake in Nicaragua.

Annex

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25 June 1973

Sir,

In pursuance of Resolution EB51.R43 of the 51st Session of the Executive Board of the World Health Organization, we appointed an expert mission which visited Managua from 23 to 28 April of the present year to advise your Ministry on the health system of the capital which has to be reconstructed as a result of the tragic earthquake of last December. I hereby submit for your consideration the report of the said mission in the hope that, should it be approved, our Organization will be able to cooperate in putting it into effect.

You will note that our consultants make a distinction between the emergency program and the long-term program. As regards the latter, they concentrate their attention on the National Health Center and the Hospital referred to in the above-mentioned resolution. The experts suggest that both establishments be coordinated into a National Institute of Health Sciences. The geographical location of these services within the city is a matter to be decided exclusively by the Government and, of course, with strict regard to the new master plan for Managua.

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Dr. Fernando Valle López  
Minister of Public Health  
Ministry of Public Health  
Managua, Nicaragua

I should like again to express to you and, through you, to the Government of Nicaragua our gratitude for the facilities which were accorded to the experts and which enabled them to accomplish their delicate assignment in such a short space of time. Once we know your decision, we shall be in a position to send the advisors to draw up the detailed practical programs with all the specifications and the architectural plans.

As regards the financing, the possibility remains open of a loan from the Inter-American Development Bank which we should hope would be underwritten by the Governments of the Continent, without prejudice to any contributions from other countries outside the Americas in the form of equipment and supplies, in accordance with the detailed program to which I referred. Please feel free to call upon us for any assistance needed in the conduct of the relevant negotiations.

Thank you for your attention to this report.

I have the honor to be, Sir,

Your obedient servant,

Abraham Horwitz  
Director

cc: Dr. Guillermo Ortega Robleto  
Dr. Carlos N. Canales



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70th Meeting  
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Provisional Agenda Item 19

CE70/14 (Eng.)  
ADDENDUM II  
1 August 1973  
ORIGINAL: ENGLISH

REGIONAL ASSISTANCE FOR THE REHABILITATION OF THE PUBLIC HEALTH SYSTEM OF  
NICARAGUA

Comments of WHO/HQS

(1) The report of a WHO/PAHO Special Advisory Mission on "Health Measures Related to the Earthquake in Nicaragua" should be seen as a comprehensive and valuable document which, when accepted by the national authorities, could constitute a very sound basis not only for reconstruction of medical care facilities destroyed by the earthquake in Managua, but also for improvement of the health care system for the whole country.

(2) The main items which should draw the attention of the Strengthening of Health Services Division (SHS) as possible areas for future collaboration with AMRO/PAHO and national health authorities in their further conceptualization and implementation are:

- (i) A comprehensive long-term programme for reconstruction and development of a health care system in Nicaragua (closely related to SHS concept of Country Health Programming).
- (ii) National Institute of Health Science, seen as a centre of excellence for teaching, research and services (closely related to SHS concept of Health Service Development Centre).