

# Technical Assistance in Public Health

## —The 6-Year Program in Greece—

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A review of the major programs of the Public Health Advisory Group of the Mutual Security Agency Mission to Greece. The programs and experiences in Greece have served as a basis for programs in the Near East, Middle East, and Southeast Asia.

**T**HE AXIS INVASION of Greece during 1940 was at least the fifth major invasion of this country in recorded history. The liberation of Greece by the Allied Forces in 1944 was followed by a highly destructive, foreign-supported civil war which left the people of the country in desperate circumstances. After the liberation and before 1947, the United Nations Relief and Rehabilitation Administration (UNRRA) successfully conducted a large-scale

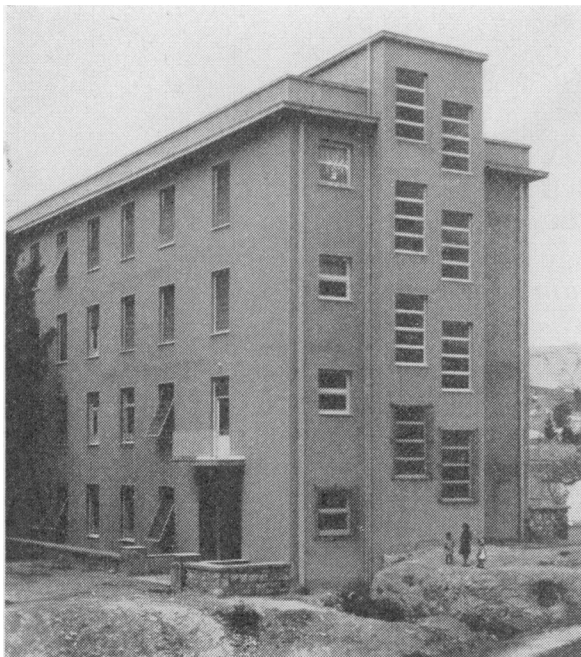
program of direct aid to Greece which included assistance in reestablishing health services. This program was actually lifesaving for many of the Greek people. The Congress on May 27, 1947, passed Public Law 75 (80th Cong., 1st sess.), known as the aid program to Greece and Turkey and commonly called the Truman Doctrine. Under this act, aid was made available by the United States to Greece in her struggle to resist communism and to remain free. The

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*The health program to Greece was established by the late Dr. Oswald Hedley, who was chief of the Public Health Division of the American Mission from July 1947 to August 1950.*



Left: A new wing added to the nurses' school of the Greek Red Cross Hospital. This wing replaces a former cafe, in which students were housed. Above: Students leave new wing for supervised training in bedside nursing.

aid program to Greece was continued in 1948 under the Marshall Plan (Public Law 472, 80th Cong., 2d sess.) and administered by the Economic Cooperation Administration (ECA), succeeded in 1951 by the mutual security program administered by the Mutual Security Agency and now by the Foreign Operations Administration.

The American Mission for Aid to Greece (AMAG) in 1947 included a Public Health Division which on July 1, 1952, became the Public Health Advisory Group and operated as such until its termination on June 30, 1953. At the peak of AMAG's activity the personnel of the division included 22 Americans, 15 of whom were Public Health Service commissioned officers.

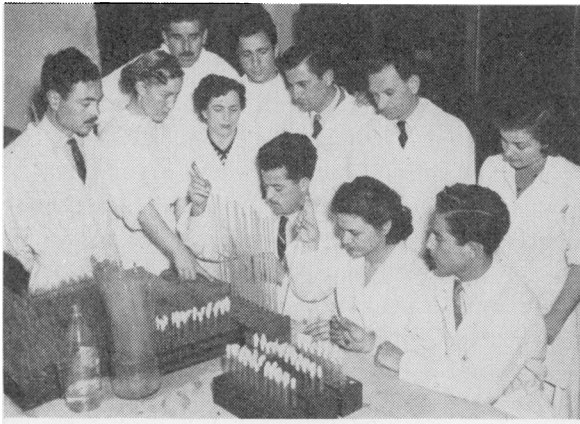
In the 6-year period of aid to Greece, approximately \$22 million was spent on technical assistance in health including consultation, training, fellowships, construction, supplies, and equipment. This amount represents about 2.5 percent of the total nonmilitary aid received by Greece from the United States as of June 30, 1953.

All nonmilitary economic aid given to Greece under the AMAG, Marshall Plan, and mutual security program was an outright grant, but for each granted dollar of aid, the Government of Greece was required to deposit an equivalent

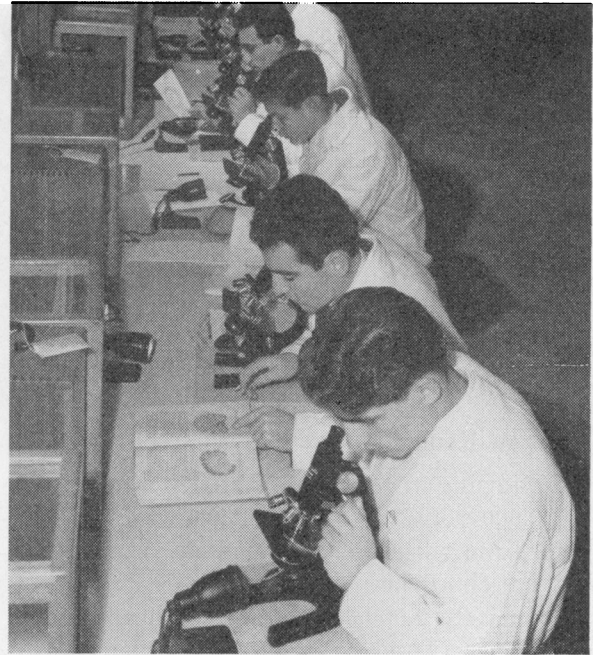
amount of Greek currency to be used for the economic development of the country. The use of these funds was jointly administered by the Government of Greece and the American Mission.

### Reorganizing Health Services

The health facilities of Greece prior to World War II lacked organized divisions within the Ministry of Hygiene for sanitation, tuberculosis control, venereal disease control, maternal and child health, public health nursing, health education, and vital statistics. During World War II and the subsequent civil war, the existing health services were subject to neglect and deliberate destruction. Death rates from preventable diseases rose sharply. Tuberculosis mortality rates were estimated at 400 deaths annually per 100,000 population in some refugee areas. There were an estimated 2 to 3 million cases of malaria a year (1). Low pay and political and social factors led many health workers either to abandon their positions or to work on a part-time basis. Personnel shortages were so severe that many programs had to begin with the training of personnel. The 6,500 physicians in the country were maldistributed. There were only 405 graduate nurses and 4 sanitary engineers.



Above: One of the classes of laboratory technicians organized by the American Mission. Students are being instructed in the use and care of pipettes. Right: Students at the new veterinary college in the University of Thessaloniki.



Because the existing Greek Ministry of Hygiene duplicated many functions of related ministries, the Mission advised that it be combined with the Ministry of Housing and Reconstruction and the Ministry of Welfare as a new Ministry of Social Welfare. This recommendation was adopted in January 1951, and the health responsibilities of the three ministries were combined under a General Directorate of Hygiene within the Ministry of Social Welfare. A division of maternal and child health and a division of vital statistics, however, were not included in the new directorate, and as of June 30, 1953, it was still undetermined whether these divisions would become a part of the General Directorate of Hygiene.

While the Public Health Advisory Group desired to be advisory only, it was temporarily necessary for it to take over the medical supply function of the Ministry of Social Welfare in order to prevent the total collapse of this service. This was done at the request of the Greek Government, and the program was gradually resumed by the Ministry of Social Welfare as its services and facilities improved.

#### Major Coordinating Agencies

When the Public Health Advisory Group of the American Mission started operations in

Greece as the Public Health Division in 1947, there were current and extensive programs in the health field conducted by the United Nations International Children's Emergency Fund (UNICEF)—now permanently established as the United Nations Children's Fund—the Cooperative for American Remittances to Europe (CARE), the World Health Organization (WHO), and the United Nations Relief and Rehabilitation Administration.

Close working relationships were maintained with these and other international agencies concerned with health activities. Later these organizations called upon the experience of the Public Health Advisory Group in continuing their technical assistance programs in health. Duplication was thereby avoided, and joint planning with Greek officials for permanent, locally supported programs was successfully carried on.

In addition, consultation and cooperative programs were carried out with many Greek-American organizations, such as the Greek War Relief Association, the Pan Hellenic Association, the American Hellenic Educational and Progressive Association, the Pan Cretan Federation, the Pan Arcadian Federation, the Near East Foundation, and others.

Because many national and international organizations, both governmental and voluntary,

had activities in the fields of health and welfare in Greece, an unofficial coordination and liaison group, called the Social Agencies Council, was organized in 1952 by the participating agencies for the purpose of considering common problems and to make the maximum effective use of available resources. The council was advised on health matters by the Public Health Advisory Group, an arrangement which was helpful in coordinating the health aspects of the consultation and cooperative programs and in increasing their effectiveness.

### **Refugee Health Program**

Following the end of the first world war, 1,500,000 refugees were returned to Greece in 1922 from their former homes in Asia Minor. At that time, the population of Greece was approximately 4,500,000. The health and social problems created by a sudden 33-percent increase in the population were so great that many of them were still unsolved at the beginning of the second world war when hostilities seriously complicated the problem still more. There were approximately 700,000 refugees in Greece by March 1947 as a result of World War II and the subsequent communist guerilla warfare. Through the cooperative efforts of the American Mission, the Greek Government, and Greek and American voluntary organizations, water supply and sewage systems were improvised in refugee areas. These in combination with mobile clinics were successful in avoiding major epidemics and in alleviating much suffering.

### **Malaria Control Progress**

Malaria control in Greece is one of the outstanding public health successes in modern times. The program was initiated by UNRRA and the World Health Organization and continued with the cooperation and financial aid of AMAG. It consisted principally of DDT spraying and dusting of homes and villages, anopheline larvae control in swamplands and areas used for ricegrowing, and epidemiological followup and treatment of diagnosed cases.

Coordination with the insect control program of the Ministry of Agriculture enabled 4,800

villages to receive residual DDT-spraying during the 1948 malaria control season. The prevalence of malaria dropped from pre-World War II estimates of 2 to 3 million cases a year to an estimated 50,000 in 1949 (2). Reports for 1950 show only 15 proved cases of malaria in towns of over 5,000 population throughout Greece. Most of these were near the Albanian border where the military situation restricted antimalarial operations. Anopheline mosquitoes with a significant resistance to DDT have been found in Greece (3). The situation is now under further study.

The economic saving of the control program is estimated to be between 30 and 60 million man-days a year, and crop yields were increased an estimated 20 to 30 percent. Before the war, Greece was spending the equivalent of \$1.2 million yearly to buy one-fifth of the world's quinine output in an effort to suppress the disease. For the 6-year period from 1946 to 1951, inclusive, the cost of DDT alone approximated \$1.5 million. The estimated cost for the entire control program from 1947 through 1952 was \$1.02 per capita. As a result of malaria control activities, the Greek Government abolished the quinine monopoly which it had set up in previous years.

In the past 2 years, a new study has been initiated to determine if malaria-free areas can be maintained as such by surveys, epidemiological followup, and the use of DDT in the immediate environment of diagnosed cases. Preliminary observations are optimistic that the economic savings will be large if the program is successful.

### **Sanitary Engineering Program**

Sanitary engineering efforts were devoted mainly to water supply programs. Initially, there were administrative difficulties in getting plans approved and projects under way, but good progress was made following the creation of a central water supply policy committee which worked through local authorities.

Before the war, typhoid rates in Greece were among the highest in Europe. Only 16 percent of the rural population was served by any kind of water supply system (4). In 1942, approximately 2 million typhoid cases with 1,836

deaths were reported. In 1951, less than 5,000 cases and 14 deaths were reported. Because of the reduction in the number of typhoid cases, an estimated 50 million man-days of work were saved during 1951 as compared with 1942. Between 1947 and 1951, inclusive, the economic saving from the reduction in prevalence of waterborne diseases has been estimated at \$7,755,000.

Some of the water distribution systems of Greek cities had been dynamited, and others were badly in need of repair. There were, in addition, many communities without an adequate and safe water supply. Much of the program, therefore, was concerned with the procurement of materials and supplies for re-

pairing and extending old systems and building new ones.

In almost all instances, contributions of local labor or local finances were used in installing the equipment or in meeting or paying a portion of the purchase cost.

As of July 1952, 750 communities had received needed supplies and equipment, 304 community water supply projects had been completed, and work was in progress on 203 additional projects. Approximately 2 million people, or 28 percent of the population, resided in the areas benefited by this program.

Besides providing consultation on administrative improvements in the division of sanitary engineering of the General Directorate of

**Table 1. Completed AMAG health facility construction projects (25), June 30, 1953**

Project	Number of beds (new)	Location	Ownership	Description of work done
Nurses' school	100	Thessaloniki	Government	Construction of new building to accommodate the school.
Nurses' home	80	Athens	Greek Red Cross	Construction of new wing.
School of hygiene		do	Government	Construction of window blinds and general repairs of building.
Medical supply warehouse		do	do	Construction of new warehouse at Rouf.
Mental hospital	500	do	do	Major repairs and remodeling.
Tuberculosis sanatorium	120	Sparta	do	Completion of unfinished building.
Hadjikota hospital	35	Ioánnina	Voluntary	Completion of surgical suite, wing, kitchen, and laundry.
Pan Arcadian hospital <sup>1</sup>	260	Trípolis	Government	Construction of new general hospital and nurses' school.
Evangelismos hospital <sup>1</sup>	450	Athens	Voluntary	Completion of annex wing.
Municipal hospital <sup>1</sup>	83	Pírgos	Municipality	Remodeling of general hospital.
American Hellenic Educational Progressive Association hospital <sup>1</sup>	100	Thessaloniki	Government	Construction of new general hospital.
Nea Ionia health center		Vólos	Social Insurance Institute.	Construction of new health center for Vólos; later sold to the Social Insurance Institute.
Health center		Áyios Nikólaos	Government	Completion of unfinished building.
Do		Arnaúta	do	Do.
Do. <sup>1</sup>		Fársala	do	Construction of new community health center and dispensary.
Do. <sup>1</sup>		Filiatrá	do	Do.
Do. <sup>1</sup>		Ierápetra	do	Do.
Do. <sup>1</sup>		Kastélli	do	Do.
Do. <sup>1</sup>		Meligalá	do	Do.
Do. <sup>1</sup>		Thívaí	do	Do.
Do. <sup>1</sup>	14	Selinoús	do	Do.
Do. <sup>1</sup>	14	Amaliás	do	Do.
Do. <sup>1</sup>	14	Khrisóúpolis	do	Do.
Do. <sup>1</sup>	14	Kalávrita	do	Do.
Do. <sup>1</sup>	14	Káristos	do	Do.
Number of beds added	1,798			

<sup>1</sup> Projects sponsored by American Mission for Aid to Greece (Economic Cooperation Administration; Mutual Security Agency), and Greek War Relief Association of the United States. Foreign procurement expenditure provided by the Greek War Relief Association.

Hygiene, eight fellowships for training in sanitary engineering were granted.

### Health Facilities Construction

Early in the activities of the Public Health Advisory Group, a survey and evaluation of all existing medical care facilities in Greece were made in cooperation with Greek authorities. On the basis of the information gathered, a hospital and health center construction program was developed.

The stage of completion of the major hospital and health facility construction as of June 30, 1953, is shown in tables 1 (completed projects) and 2 (active projects). Not shown are the 53 early emergency projects for badly needed repairs to existing institutions. These projects were financed by AMAG through an appropriation to the Ministry of Hygiene during the fiscal year 1947-48 (5).

An agreement between the Greek Government, the American Mission, and the Greek War

**Table 2. Active AMAG health facility construction projects (26), June 30, 1953**

Project	Number of beds (to be added)	Location	Work to be done
Rabies station		Athens	Remodeling and repairs.
Car park		do	Construction of garage and service station for the vehicles of the Ministry of Social Welfare.
Maternity hospital	400	do	Completion of maternity hospital and midwifery school.
Communicable diseases hospital		do	Construction of laundry and kitchen building; repairs of existing facilities.
Mental hospital	130	Thessaloniki	Completion of new nursing unit.
Tuberculosis sanatorium	150	Ioánnina	Completion of sanatorium; construction of nurses' home.
Do	250	Lamía	Completion of new sanatorium.
Venezelion tuberculosis sanatorium.	200	Iráklion	Completion of new sanatorium in cooperation with the Pan Cretan Federation and the town of Iráklion.
Civil servants' tuberculosis sanatorium.	80	Attica	Completion of existing contract, part of new wing.
Asvestochori tuberculosis sanatorium.	400	Thessaloniki	Completion of new bed unit, service building, water supply and sewage disposal system, and of surgical, administration, and laboratory sections.
Laikon hospital	200	Athens	Completion of nurses' home, outpatient section, kitchen and laundry; repairs of nursing units.
Hippokratíon	90	do	Completion of nurses' home and service building (kitchen, laundry, and powerplant).
Réthimnon hospital	50	Crete	Completion of new general hospital in cooperation with the Greek War Relief Association.
Kentrikon hospital		Thessaloniki	Remodeling of hospital for use as teaching center for nurses and medical students.
Ierápetra hospital	20	Ierápetra	Construction of nursing unit in the existing health center.
Nea Ionia hospital		Athens	Construction of outpatient wing and completion of laundry and heating plant.
Kalámai hospital		Kalámai	Construction of health center section of the hospital.
State general hospital	200	Piraiévs	Completion of wing and service facilities and of concrete framework in the rest of the 400-bed hospital.
General hospital		Filiátes	Installation of laundry and heating equipment.
Do	100	Vathí (Sámos)	Completion of new hospital.
Do	150	Lamía	Do.
Children's general hospital		Athens	Installation of kitchen and laundry equipment.
Health center laboratory		Lárisa	Repairs and completion.
Do		Pátrai	Do.
Health center		Komotini	Completion of new health center.
Do		Vólos	Do.
Number of beds to be added	2,420		

Relief Association provided for the construction of 11 health centers and 2 hospitals and the completion of 2 additional hospitals as part of the total hospital plan of the country (table 1). The health centers, which are located in areas of particular need, were completed and operating by 1950.

As a result of budget reductions, the construction programs strained the financial resources of the Ministry of Social Welfare. Changes of government and other administrative difficulties have made it extremely difficult for many of the hospitals to be completed and placed in operation even though most of the institutions are more than 90-percent completed. A good solution for completing and operating certain of the institutions is the negotiated agreement between the Government and the Social Insurance Institute, which operates a prepaid medical care service. The plan provides that a loan from the institute be used for completion of the hospitals and that the loan be repaid by the Government in services to beneficiaries of the plan.

### **Medical Supplies Project**

After the withdrawal of UNRRA, the Government's facilities for procurement, storage, allocation, and distribution of medical supplies collapsed. At the request of the Government, the Public Health Advisory Group operated the medical supply program until Greece was able to reestablish its own facilities. By assisting in the reorganization of supply procedures, eliminating duplication and luxury-type items, and using local procurement whenever possible, a \$15 million purchase request for medical supplies was reduced to \$3 million (6).

Another saving was effected by the construction of a central medical warehouse and the liquidation of nine scattered medical and sanitary warehouses which were rented. Storage and handling of medical supply items were improved, and the resultant saving in yearly operating expenses is estimated at \$70,000.

"Operation end-use medical supplies" was begun in 1951. Its objective was to obtain the best distribution and use of all available medical supplies. Joint Greek-American medical supply teams with authority to make allocations

studied 161 hospitals and more than 350 clinics in all areas of Greece. Improvements were made in the utilization of approximately \$5,500,000 worth of needed supplies found in storage or not in effective use. Nearly a million dollars worth of supplies was redistributed for more effective use, and \$230,000 worth of supplies was made available for sale as unusable surplus.

### **Tuberculosis Control**

Because of reporting difficulties, tuberculosis mortality rates in Greece cannot be based on complete factual data. Prior to World War II, a rate of 100 annual deaths per 100,000 population was estimated. In 1952, the estimate was 250 per 100,000 population, but mortality information available for towns of over 5,000 population gave a calculated rate of 18.4 deaths per 100,000 for the year, which we feel is too low to be accurate. From our experience and observations, we would estimate the present annual death rate from tuberculosis to be about 80 per 100,000 population.

During World War II, tuberculosis death rates rose sharply because of greatly depressed living conditions. After the liberation, UNICEF, in cooperation with the United Nations Relief and Rehabilitation Administration, initiated a tuberculosis control program. These organizations also cooperated with the Scandinavian Red Cross in undertaking an extensive BCG vaccination program.

At the end of 1948, 11 BCG-vaccination teams had tested 59,977 children and vaccinated 33,023. A compulsory BCG-vaccination law was passed by the Parliament in 1949. During 1949 and 1950 the program was expanded, but after December 1950 it was continued on a reduced scale by the Greek Government alone. Approximately 1,467,000 children had been tested and 1,118,000 had been BCG-vaccinated by August 1951 (7).

Mass X-ray work in the Athens-Piraeus (Piraeus) area was begun in 1946 and was continued intermittently through 1949. Bacteriological followup was severely limited, but highly suggestive shadows on the chest X-rays were used as a basis for estimating a 1-percent prevalence of tuberculosis in the adult popula-

tion (8). Since World War II, more than 1 million people have received chest X-rays.

The construction of 750 new sanatorium beds for tuberculosis in 6 locations throughout the country and the supplementing of 400 beds in existing tuberculosis sanatoriums to bring the latter up to minimal standards was planned in 1947. The Pan Cretan Federation later joined in a cooperative program with the Government of Greece and ECA for the construction of a 200-bed hospital on the Island of Crete to bring the total additional new beds for tuberculosis in Greece to 1,350.

Preventorium for the care of healthy children who come from homes where there is a case of tuberculosis are still in use, although the Public Health Advisory Group continually recommended that these facilities be used for the treatment of active cases only.

An effective technical assistance project in tuberculosis control was the 6-week course for training health department personnel and sanatorium employees in the operation of X-ray equipment. As of June 30, 1953, a total of 68 technicians had been trained and had returned to their local communities to work.

Using the combined experience and opinions of all sections of the Public Health Advisory Group, a plan was developed for redistributing X-ray equipment owned by the Greek Government for maximum effective use in the tuberculosis control program.

#### **Other Communicable Diseases**

The incidence, prevalence, and mortality rates of communicable diseases in Greece declined during the period of technical assistance in health. In 1948, 1,272 cases of diphtheria and 55 fatalities were reported. The number of diphtheria cases reported in 1952 is not available, but 39 deaths were reported. The morbidity and mortality rates for scarlet fever and whooping cough have undergone similar reductions. However, death rates from diphtheria, whooping cough, typhoid, tetanus, and other preventable diseases still remain high in Greece. The local health centers could do much more than is now being done in reducing the prevalence of these diseases.

Recommendations were made involving mod-

ern concepts of venereal disease control. These included acceptance of penicillin as the treatment of choice for syphilis and the use of serologic tests in the evaluation of treatment. A full-time Greek consultant was hired to travel throughout the country assisting local health centers in their venereal disease control programs. The use of penicillin is increasing, and the prevalence of syphilis, as reported, is thought to be decreasing. The Greek Parliament passed legislation making venereal diseases reportable, but more effective programs and improved reporting will require continued consultation and health education.

#### **The Trachoma Problem**

Trachoma continues to be an important health problem in some areas. Rural trachoma clinics adopted the use of newer antibiotics for treatment. A law prohibiting employees from holding more than one government job made necessary the resignation of many part-time clinicians who participated in more than one public health program, and the number of trachoma clinics fell from 51 to 14.

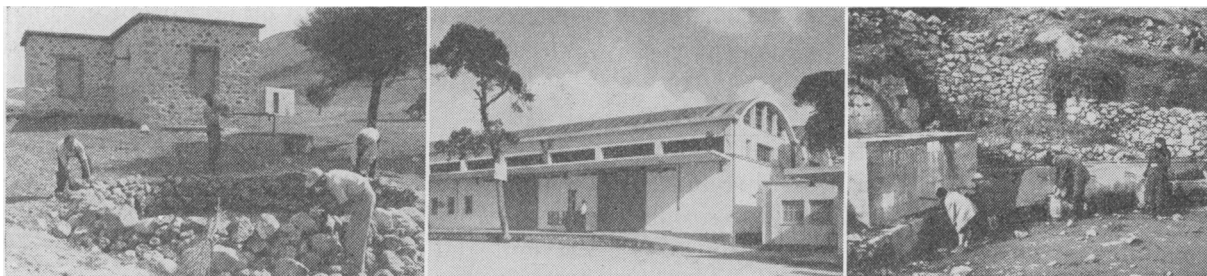
#### **Renewed Interest in Leprosy**

In the immediate postwar period, Greek treatment facilities for lepers were very unsatisfactory. Consultation on newer methods of intensive treatment with modern drugs was given, and local health officers were educated in the modern concepts of the social and epidemiological aspects of leprosy. The Ministry of Social Welfare arranged for foreign experts to visit leprosariums and to make recommendations. A bacteriological survey was also made on all leprosy patients, but some who were bacteriologically safe refused to leave the government-supported institutions where they had grown accustomed to a sedentary life. As a result of technical assistance in health, a new interest has developed in the improved treatment of lepers and control of leprosy.

#### **Health Education Service**

From its beginning, the Public Health Advisory Group of the American Mission urged





**Left: Villagers from Mavrommáti, 60 miles north of Athens, cut down the threat of waterborne diseases by building their own water supply system. Water pumps are housed in the building in the background. Center: Medical supply warehouse near Athens, built as part of the program to improve the acquisition, storage, and distribution of pharmaceuticals and hospital equipment. Right: Townspeople of Alevroú, near ancient Sparta, built this water system with cement and pipe furnished by the American Mission.**

the establishment of a division of health education in the Greek health services. Assistance was given in drafting the legislation for creating such a division. A fellowship was granted to a Greek physician for the study of health education in the United States. During 1952, the division of health education was established in the General Directorate of Hygiene with the Greek trainee, who had returned from the United States, as its director. Nine of the eleven positions were filled, and the program began with an inservice training program for personnel of the directorate.

Assistance was given in obtaining equipment for production and duplication of health education materials and in training personnel for the operation of the equipment. During the first 6 months of 1953, the division of health education expanded its program to rural areas by having Greek health officials give talks on health subjects in addition to showing sound motion pictures.

#### **Artificial Limbs Programs**

In 1947 there were an estimated 27,000 amputees in Greece. Many of these were women and children wounded by land mines. The existing facilities of the country were inadequate to meet the need for artificial limbs. Jointly administered funds were used to purchase semi-finished limbs from Europe and to increase Greek production to approximately 1,000 artificial limbs a month. Greek artificial limb technicians were trained in England through

fellowships, and in 1951 Greece produced 2,435 finished artificial limbs.

The services of an orthopedic consultant were made available, and the Near East Foundation made a valuable contribution of hiring 3 physiotherapists to help with the artificial limb program and to assist in developing a school of physiotherapy. A 1-year scholarship in the United States was granted to one physiotherapist. Three others were sent to England for advanced training.

#### **Veterinary Consultation**

The Public Health Service veterinary officer assigned to the Public Health Advisory Group worked in the Division of Food and Agriculture of the Mission because his activities were closely related to the agriculture and livestock program. Consultation was given in the control of echinococcosis, anthrax, brucellosis, tuberculosis, and rabies, and assistance was given in opening and equipping eight veterinary clinics throughout Greece. Consultation was also given in developing successful cooperative measures for the joint control of animal diseases in border areas between Greece and Yugoslavia.

From the end of the war through 1953, it is estimated that there has been a 25-percent reduction in the prevalence of infectious and contagious diseases among animals. The resulting increase in the production of meat and milk and the increased work derived from animals have been valued at \$20 million for the

period from January 1, 1948, to June 30, 1953.

The rabies control and demonstration carried out on the Island of Zákynthos (Xanthe) resulted in the elimination of the disease from the island and was a successful project. However, more demonstration projects directed to the education of the sheepherders in the country, who own large numbers of sheep dogs, is needed before adequate rabies control legislation can be passed.

The establishment of a veterinary college at the University of Thessaloníki (Salonica) was a significant accomplishment of the veterinary program. Earlier, all veterinary training in Greece had to be obtained abroad. Ninety-eight of the one hundred and ninety-three veterinarians in the country during 1947 were in government employ. WHO expert consultants helped establish the college in 1952, and 30 students started the new 4-year course in veterinary science. The cost of training a veterinarian in Greece is estimated to be about one-fourth that of foreign training.

Equipment was made available through the American Mission to enlarge the Veterinary Microbiological Institute at Athens, and a fellowship was granted for study in Europe. If purchased commercially, the veterinary biologicals produced from 1947 to the end of June 1952 would have cost \$1.3 million.

#### **Use of Laboratory Equipment**

Extensive laboratory supplies were imported into Greece by UNRRA and later by the American Mission. The laboratory program was concerned with the effective use of this equipment. Two consulting Greek microbiologists were hired to improve the quantity and quality of laboratory work in rural Greece and to survey existing laboratory facilities. These consultants also trained 42 rural health department employees as laboratory technicians in two 9-month courses and then followed the technicians' progress by subsequent field visits. The technicians did excellent work.

#### **Vital Statistics Reporting**

During 1948, assistance was given in preparing legislation for vital statistics procedures

similar to those used in other European countries and based on the International Statistical Classification of Diseases, Injuries, and Causes of Death. The classification was translated into Greek, and 8,500 copies were distributed. Two physicians and two statistical workers were trained in the application of the classification, and they, in turn, trained 63 Greek officials in its use. A scholarship was also given for 1 year's foreign study in vital statistics methods.

Two United Nations statistical consultants have been giving technical assistance to Greece and have continued this assistance since the withdrawal of the Public Health Advisory Group (the Public Health Division at the time) from this activity in 1950.

As of June 30, 1953, the General Directorate of Hygiene was dependent on the services of the Greek Ministry of Coordination for all vital statistics information. Very little information was available from this source on morbidity and mortality data for towns under 5,000 population. Although progress has been slow, legislation that would provide for a good vital statistics service in the General Directorate of Hygiene is under consideration.

#### **Public Health Nursing**

Public health nurses are still a rarity in local health departments. Many rural hospitals have no graduate nurses; it would be unusual to find more than two in any rural hospital. Most of the clinical nursing is still done by practical nurses and nurse assistants. There has been improvement, however, and the next 5 years may see a great increase in the number of nurses and nursing services. Almost all of the 405 registered nurses in 1947 were working in the Athens area. The total enrollment of the 3 existing nursing schools in the country was less than 300.

The State School of Visiting Nurses in Athens was expanded with American aid in 1948 to provide space for 60 additional students. In 1951, a new wing on the Greek Red Cross School of Nursing, also in Athens, provided for a capacity of 50 additional students, and in 1952, a new nursing school with a capacity of 100 students was established in Thessaloníki

(Salonica). These projects brought the total nurse training capacity in Greece to 606 students.

As of June 1952, there were in training approximately 425 nursing students in the 3-year course and 70 students in the 1-year course. The Greek nursing schools were annually graduating approximately 180 3-year students and 40 1-year students. Modern nursing textbooks were translated into Greek, and, with the assistance of the Near East Foundation, visual aids were supplied. A program for training practical nurses was begun during 1948. In 45 Greek institutions, 1,293 practical nurses were trained. In addition, 74 medical corpsmen were trained for service with the Greek Armed Forces. The course lasted 2½ years.

The number of graduate nurses known to be employed as of June 1, 1952, was 980. This was more than double the number employed in 1947. There were 1,176 graduate registered nurses who had completed the 3-year nurse-training course. In addition, of the 273 registered nurse assistants who were graduates of the 1-year training course, 140 were working. A third group of volunteer nurses, who had received approximately 6 months' training, were estimated at 5,800. There was also a fourth group of 2,100 untrained practical nurses. Most of the third and fourth groups are working in rural Greece.

A nursing practice act was put into effect in 1950 to regulate the practice and standards of nursing throughout the country. It did much to establish the needed social prestige for the profession, which had been too low to attract young women to a nursing career. The Hellenic Graduate Nurses' Association was successfully reactivated during 1949 as an organization of professional nurses interested in improving nursing in their country.

### **Professional Training**

An early effort was made to improve and expand health training facilities, including the grants of equipment and supplies, and later, foreign fellowships for advanced students and instructors.

A fellowship training program was initiated in 1948 with emphasis placed upon training

regular employees of the General Directorate of Hygiene. Fellowship applications were reviewed by the Public Health Advisory Group and then by a fellowship training committee in the Ministry of Coordination. Sixty-five foreign fellowships covering a broad range of needed health activities had been granted as of January 31, 1953. Of these, 42 fellows received training in the United States.

Training standards for the 2 medical schools and the 1 dental school were seriously low. All schools suffered from an excess of students. Large grants of equipment and assistance in expanding the physical capacity of the schools were given. By legislation the dental school was made a separate faculty of the University of Athens on an equal status with other faculties. Previously, it had been partially controlled by the university's medical school. In addition, 30 dental treatment units were procured and installed in the school. These units together with X-ray equipment, which was also provided, helped overcome the inadequacy of the existing equipment.

### **Athens School of Hygiene**

The Athens School of Hygiene, which was under the supervision of the Ministry of Hygiene, underwent severe losses of prestige, staff, and physical facilities after the war. Portions of the school building were taken over by various units of the army, the veterans service, the police, and a midwifery school, so that teaching was not effective.

A project agreement was negotiated in 1950 with the Ministry of Social Welfare for a thorough study of the Athens School of Hygiene to be made by the former dean of the London School of Hygiene and Tropical Medicine. The objective of the study was to develop a proposal for the reorganization and improvement of the school (9). Recommendations from a 1929 study by the Rockefeller Foundation formed part of the basis for some of the proposed improvements.

Numerous meetings were held to prepare draft legislation for reorganizing the School of Hygiene, based on the study proposal. Finally, in May 1953, a compromise draft proposal for the reorganization legislation, which was ac-

ceptable to the Ministry of Social Welfare, was started through legislative channels.

### Summary

United States assistance to the Greek health program and resulting accomplishments during the 6-year period 1947-53, have been described. In this period, the consultation of United States health technicians, the expenditure of \$22 million matched by Greek funds, and the close cooperation with Greek agencies, Greek-American organizations, and international organizations such as UNRRA, UNICEF, WHO, and CARE brought notable improvements in all phases of the health program.

This was the first instance in which United States technical assistance to another country's health program was initiated in an emergency situation and successfully completed. Ill health was a major factor in low living standards and unrest. Constructive United States international cooperation with Greece and with multi-lateral agencies helped alleviate the emergency and contributed significantly to improved and more stable living conditions for the Greek people, who are an important part of the free world alliance.

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## Ideas

### *The Infectious Baby Sitter*

MARICOPA COUNTY, ARIZ. Health cards for baby sitters are being used in Maricopa County, Ariz., which has a population of 265,000.

Dr. Lucy N. Sikorsky, director of the Maricopa County Health Unit, reports that an applicant for a baby sitter's health card is given a free health examination at the health

unit. The examination includes chest X-rays and blood tests. The health cards must be renewed each year. Although these cards are not compulsory for baby sitters, they have proved an advantage in getting employment. People prefer the baby sitters who have obtained the cards.

A typical incident which gave impetus to the use of the cards was the discovery recently that 11 children of 2 families, ranging in ages from 3 to 12 years, showed signs of tuberculosis infection. X-rays of the parents showed no evidence of tuber-

culosis. But these 2 families employed the same baby sitter, and X-rays of this kindly, dependable woman showed positive evidence of pulmonary tuberculosis. The 11 children entrusted to her care had contracted the disease from her.

According to Dr. Sikorsky, discovery of this case halted further spread of the disease to more children by this particular baby sitter, but it also pointed out the vital need for health examinations of persons providing baby-sitting services and domestic help.