

UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



LIMITED

E/ICEF/L.642
26 August 1954

ORIGINAL: ENGLISH

UNITED NATIONS CHILDREN'S FUND

Programme Committee

SPAIN

Recommendation by the Executive Director for an Apportionment
for the Development of Maternal and Child Health Services

1. In this paper the Administration recommends, subject to the availability of funds, an apportionment of \$90,000 to Spain from the Europe Area allocation to assist in the development of certain maternal and child health services. The proposed UNICEF assistance would include supplies and equipment for the following:
 - a) for clinics for the care of premature babies;
 - b) for laboratories for syphilis serology and for treatment of syphilis in children and pregnant mothers; and
 - c) for a trachoma control campaign.

If this recommendation is approved, it will represent the first UNICEF assistance to Spain.

High Infant Mortality: a National Problem

2. In the year 1900, when the population of Spain was approximately 18 million, out of every thousand live births, 187 babies died in their first year. By 1953, when the population had increased to 28.5 million, the infant mortality rate was down to below 53 per thousand live births. The chart of infantile mortality rates does not, however, show a steady decline over these five decades. In the period of the Civil War (1936-1939) and in the critical difficulties of the first years of the Second World War, the descending trend was reversed. The infant mortality rate climbed to 143 in 1941. In the fifteen years since the end of the Civil War the Spanish Government and people have made a concentrated effort to reduce the loss of infant lives from avoidable causes, since this has been and continues to be regarded as a basic health problem. The measure of the

/results achieved so

results achieved so far in this struggle is the fall in the infant mortality rate from 143 per thousand live births in 1941 to 53 in 1953. The comparative figure for the United States in 1952 was 29.

3. A comparative analysis has been made of the causes of death of the infants under 12 months who died in the two four-year periods 1941-1944 and 1945-1948. The results may be summarized as follows:

<u>Cause of Death</u>	<u>Infant Mortality Rate per thousand live births</u>	
	<u>1941-1944</u>	<u>1945-1948</u>
<u>Congenital:</u> including congenital debility and deformation of the heart	12.1	9.2
<u>Infectious:</u> including respiratory diseases	32.6	24.4
<u>Alimentary:</u> including diarrhoea, enteritis and avitaminosis	36.8	21.5
<u>Other:</u>	<u>2.3</u>	<u>2.0</u>
All Causes:	<u>83.8</u>	<u>57.1</u>

4. The first objective in the struggle to reduce infant mortality is the prevention of those diseases which cause the most deaths, namely, diarrhoea, enteritis and diseases of the respiratory system. The Government is also concentrating on the problem of congenital diseases and congenital defects and the associated problem of premature birth. There is great interest among pediatricians in establishing specialized premature wards and in training of professional and auxiliary personnel in the care of the prematurely-born infant. At present there is only one premature centre, run by a doctor and two nurses who are the only specially trained team in Spain. The Spanish Government has also been greatly concerned to raise the general standard of health among children by preventive measures to reduce the range of the other serious infections. Of these, trachoma and conjunctivitis are the most widespread.

Government Action to Alleviate the Problem

5. In the fifteen years since the end of the Civil War general health services, both curative and preventive, have been expanded on a most impressive

scale to provide nationwide coverage. Much emphasis has been placed on health services for children and their mothers and a great effort has been made, by the effective use of publicity, to instruct the people in the problems of child health, and to encourage mothers to make full use of the preventive as well as the curative services now available to them.

6. In the years immediately following the Civil War these services were to a great extent merged with the social welfare and relief undertakings of the new government in its initial effort to mitigate the suffering caused by the war. More recently, the social welfare aspects of the health services have become the special concern of the "Auxilio Social", now constituted as a State organization with a chief administrator responsible to the Ministry of the Interior.

7. The technical medical aspects of the work of the health services are the responsibility of the Department of Health in the Ministry of the Interior. The service is organized radially through 50 Provincial Institutes of Hygiene. These Institutes, each located in a provincial capital, are major polyclinics with a laboratory attached. The health service within each province is administered from these Institutes. Some of them also include schools for training in preventive maternal and child health services.

8. Within the Department of Health there is a Section of Maternal and Child Health and School Hygiene, which conducts a national campaign to combat preventable infant mortality. The nationwide network of maternal and child health centres administered by the Section is shown in the map attached to this paper (Annex I). This map does not however show services available at the village level.

9. Villages of up to 10,000 inhabitants are served by a small all-purpose health unit ("servicio primario") and by visiting doctors and midwives in the public service. There are 16,000 A.P.D. (Asistencia Publica Domiciliaria) doctors who are part-time official representatives of the Department of Health and combine public health functions with general practice.

10. The instruction of the medical profession and of auxiliaries and the public for the improvement of child health is centred in special schools (Escuela de Lucricultura), of which there are now 15 located in provincial Institutes of Hygiene.

11. Curative services have also been expanded on a very large scale in the last fifteen years. Under the national health insurance scheme (Seguro de Enfermedad) all employees of private enterprises and their families (over one-third of the population) are compulsorily included in a group-insurance plan providing hospital and medical services. Both employers and employees contribute. State and other employees are variously included in other group medical insurance schemes.

12. In 1945 a national plan was approved to build sixty-seven hospitals, with a total capacity of 16,000 beds, sixty-two polyclinic dispensaries and 144 smaller dispensaries. By the end of 1953 thirty-four of these hospitals and thirty-four dispensaries had been completed. The capital fund for this great volume of new construction is raised for the most part by the issuance of bonds by the National Insurance Institute (Instituto Nacional de Prevision), secured on the revenues of the Health Insurance Scheme.

Government Request

13. On 29 July 1954 the Spanish Ministry of Foreign Affairs addressed a formal request to UNICEF for assistance in selected projects forming part of a provisional plan for future cooperation between Spain and UNICEF. The projects proposed included the establishment of clinics for premature babies, the equipment of two central laboratories to establish modern serological techniques for the diagnosis of syphilis in mothers and children, and a trachoma control campaign in the southeast part of Spain.

Proposed Plan of Operations

A. Clinics for Premature Babies

14. The Problem: In 1953, 502,754 babies were born alive in Spain, and 17,620 were born dead. 1,197 died during delivery. Of those born alive, 2,561 died within twenty-four hours and 30,794 more died within the first year of life. In all, therefore, 52,172 babies died between the sixth month of foetal life and the first anniversary of birth. Studies made in Spain have established that of those deaths 17,000 to 20,000 were caused by prematurity and the associated factors of congenital debility or defect.

/15. Existing services

15. Existing Services: The only properly equipped premature centre operating in Spain with a trained staff is in the maternity wing of the large National Insurance hospital at Valencia. Some 200 incubators of Spanish manufacture are in use in various maternity centres throughout the country, but in almost every case these centres lack the facilities of a premature ward and have no staff/^{specially}trained in the care of premature infants.

16. The Proposal: The WHO Expert Group on Prematurity has observed that "the maximum results in any premature-infant programme can best be attained by lowering the incidence of prematurity, since even with the best of postnatal care there will still remain an irreducible but appreciable minimal premature-infant mortality rate".*

17. The Spanish Government plans, with UNICEF and WHO assistance, to send doctors and nurses abroad to study the prevention of prematurity and the care of premature infants. These doctors and nurses would return after their training to four premature centres which are to be established in Madrid, Barcelona, Valencia and Bilbao. Here they would train other personnel for centres to be established gradually in other cities. It is intended that these specialists would attend to the prophylaxis of prematurity, as well as the care of premature infants, and work in close cooperation with the maternity centres on the preventive aspects of the programme.

18. It is recommended that UNICEF provide equipment for the four pilot premature centres. (See below para30). WHO has made budgetary provision for fellowships for four doctors and four nurses (para31 below) and the Government proposes to avail itself of other fellowships for the study of prematurity which may be offered from time to time by WHO and the International Children's Centre.

B. Laboratories for Syphilis Serology

19. The Problem of Congenital Syphilis: Although accurate figures are not yet available, serological tests among pregnant women attending maternity centres in Madrid and Barcelona indicate that approximately 10 per cent are syphilitic, a proportion not inconsistent with crude estimates that of the population at large, one person in ten has syphilis.

* World Health Organization, Technical Report Series No. 27
Expert Group on Prematurity. Final Report, October 1950.

20. Syphilis is frequently the cause of premature birth and of congenital debility and defects, which, as stated in para. 14, caused 17,000 to 20,000 infant deaths in Spain in the year 1953. Yet syphilis is the one cause of premature birth of which the possibility of prevention is definitely assured. The Second Report of the WHO Expert Committee on Venereal Infections and Treponematoses states:

"The effectiveness of penicillin in the treatment of syphilis in pregnancy and congenital syphilis has been demonstrated... and it is significant that this preventive non-toxic weapon permits healthy infants to be born, in more than 95% of the cases, regardless of trimester of pregnancy in which treatment is given."

21. The solution to the problem is not, however, simply to provide penicillin. Diagnosis of syphilis depends upon serological methods which require the use of standardized antigens if reliable results are to be obtained. In countries with advanced health services this standardization is maintained by inter-laboratory exchanges of reference antigens. Under the authority of the WHO Expert Committee on Biological Standardizations, Provisional International Reference Preparations (PIRPs) are produced in the United States, from which cardiolipin antigens can be prepared to provide an international standard of reference. In Spain, a stringent foreign exchange situation has prevented the importation of antigens, and although a number of small laboratories produce them, standardization has not been achieved, with consequent serious unreliability of diagnosis. Checks carried out in the Faculties of Medicine of Madrid and Barcelona revealed a high proportion of false positive reactions when locally manufactured antigens were used and no inter-laboratory checking was feasible.

22. Before prematurity due to maternal syphilis can be prevented in Spain by the use of penicillin, the maternity centres must have reliable serological diagnosis available to them. In the Third Report of the WHO Expert Committee on Venereal Infections and Treponematoses, the Sub-Committee on Serology and Laboratory Aspects stated that they "were of the opinion that an adequate national system for control of serological work...calls for a manual on serology, training facilities for technicians, distributions of reference reagents, collaboration between laboratories, interchange of samples and a yearly check-up of sensitivity and specificity of the serological methods used, the latter to be made by distributing samples for testing purposes"

/23. The Spanish Government

23. It is recommended that UNICEF provide equipment and supplies including cardiopilin antigens for two such laboratories, and penicillin for the cure of all cases of syphilis found in children and pregnant women in 1955 and 1956. The Government plans to produce penicillin to WHO specification in two national plants; until these plants are in production the Government will import penicillin for the treatment of syphilis in the balance of the population.

C. Anti-trachoma Campaign

24. The Problem of Trachoma: Trachoma is endemic in the south eastern region of Spain. It is most prevalent in the coastal provinces of Murcia, Almeria and Granada but is also a considerable problem in the neighbouring provinces of Alicante and Malaga, and probably exists elsewhere. Incidence is highest in the towns and villages on the coast, reaching 95% of the population in some places. Few if any of the communities in this region are entirely free from the disease. There is no reliable official estimate of the total number of trachoma cases in the country, but health officials and ophthalmologists set the figure at 150,000.

As elsewhere, there is a close relation between poverty and overcrowding and the incidence of trachoma. The common source of infection is a matter of dispute but certainly a major source lies in the trachomatous children themselves and it is likely that transmission is commonly from older to younger children. The clinical signs and the course and effects of trachoma in Spain are identical with those of the North African form of the disease while associated bacterial infections of the conjunctiva, although common, are less widespread and less severe than in Africa.

25. Epidemics of acute and subacute conjunctivitis, mostly of Koch-Weeks origin, occur regularly in the autumn each year, and sometimes also in the spring. Corneal complications are relatively infrequent in these infections. It is the experience of ophthalmologists in Spain, as in other countries, that the first signs of trachoma usually appear after the subsiding of an attack of acute conjunctivitis and that established trachoma is exacerbated by periodically superimposed infections. The role of bacterial conjunctivitis in the epidemiology of trachoma in the country has not however been sufficiently studied as yet.

26. Existing Services to Deal with Trachoma: Trachoma is a notifiable disease in Spain. Ministry of Education regulations require that all children applying for admission to school be examined for trachoma and that active cases be either admitted directly to special "trachoma schools" (of which there are very few) or referred to the local anti-trachoma dispensary for treatment before being admitted to a normal school. It has been impossible, however, to enforce these regulations and a great number of trachomatous children are in fact attending regular schools.

27. In the southeastern provinces there are a number of dispensaries for the treatment of trachoma, but most of them lack adequate diagnostic equipment. Attendance at the dispensary is voluntary and, in the majority of cases, the present system is ineffectual in curing the disease. Many sufferers seek treatment only because of secondary infections and cease to attend when temporarily improved. Few of the children referred from the schools attend the dispensary regularly and relapses are common.

Proposed Plan

28. The national and provincial health authorities concerned have decided upon a new approach which would be based on systematic case-finding and the treatment of trachomatous children in the normal schools. In certain isolated communities with a very high incidence of trachoma, the entire community would be treated. The overall objective is the effective control of trachoma as an endemic problem by a system of collective treatment in schools and homes as follows:

- a) Collective treatment in the schools: The school treatment programme will be similar to those already adopted in other countries. In half the schools, case-finding will be carried out in December and treatment commenced in January; in the other half of the schools, case-finding will be done in March and treatment commenced in April. Treatment will be by antibiotics applied twice daily for sixty days. Re-examination will be carried out at the end of the summer term and on the re-opening of the schools in October. Relapses and resistant cases will be re-treated the following January along with new trachomatous children joining the school for the first time. It is estimated that some 3,500 children in the area will have to be treated by this system.

/b) Collective treatment

- b) Collective treatment in the homes: The trachoma situation in such villages as Carboneras, La Mamola, and Aguilas is so desperate that nothing short of collective treatment of the entire population is likely to reduce it. There is every justification for a well controlled trial of the system of mass treatment which has given such gratifying results in the Skoura experimental sector in Morocco, in which antibiotics are applied to each person's eyes twice daily on three successive days each month over a period of six months. The compactness of these Spanish communities, of which the total population is about 5100, makes it feasible to carry out this system of treatment by house-to-house visits. The people of each village would be divided into eight groups, the groups being treated over successive three-day periods within the monthly cycle.

29. The Government will assign one full-time ophthalmologist to carry out constant evaluation of the work in the three provinces. A co-ordinating officer based on the School of Public Health in Madrid will also be appointed. The part-time medical officers in service in the area will increase the time to be given to trachoma control work. Later a full-time ophthalmologist will be appointed in each of the three provinces. The Government rightly believes that the chief need at present is for nurses and has agreed to provide and train fifty of them for work on this project.

/UNICEF commitments

UNICEF Commitments

30. If the recommendations made in the foregoing sections of this document are approved, UNICEF would supply the following:

a) Clinics for Premature Babies

Equipment for 4 premature centres, including incubators, resuscitators, bronchoscopes, tracheal catheters, microscopes, refrigerators for dietary kitchens, and air-conditioning units for post-incubation transition rooms \$ 34,000

b) Laboratories for Syphilis Serology

Supplies and Equipment, for 2 central control laboratories, including media, reagents and antigens \$ 15,000
 Penicillin, exclusively for the treatment of children and pregnant women \$ 5,000 \$ 20,000

c) Anti-Trachoma Campaign

Supplies and Equipment, comprising Antibiotics and Sulfa Drugs, Diagnostic Instruments and Individual Record Cards \$ 13,000
 Soap \$ 2,100
 Transport: 1 station wagon and 10 bicycles \$ 2,700 \$ 17,800

d) General Contingencies

\$ 10,000

e) Freight, estimates at

\$ 81,800

\$ 8,200

Total

\$ 90,000

WHO Approval and Participation

31. WHO has signified its technical approval of these projects. The WHO budget for 1955 includes in the Technical Assistance section (Priority I) provision for the following in connection with this project:

a) Clinics for Premature Babies

Fellowships for 4 doctors and 4 nurses in late 1954--early 1955.

b) Laboratories for Syphilis Serologyi) Consultants

1 VD consultant for 2/3 months in each of 2 years

ii) Fellowships

1 long-term fellowship for a medical serologist

2 short-term fellowships for serologist/technicians

iii) WHO staff to assist with the programme and especially

with the postgraduate courses in venereology

c) Anti-Trachoma Campaign

i) Consultancy in trachomatology (Approx. 6 weeks per annum in the country) by the Trachoma Officer of the Regional Office.

ii) 3 fellowships totalling 9 months of study

iii) 1 statistician for 4 weeks

Government Commitments

32. The Government has undertaken the following:

a) Clinics for Premature Babies

- i) the structural modifications, services and furnishings required.
- ii) the provision of all general and technical supplies and equipment necessary to the project with the exception of those supplied by UNICEF including approximately 24 Spanish-made incubators for prematures weighing between 2,000 and 2,500 grams.
- iii) the establishment of full-time mobile services for the movement of premature babies to and from the centres
- iv) the professional and auxiliary staff required to run the centres and to make full use of the UNICEF equipment including: 2 part-time doctors, 2 full-time medical interns, 1 chief nurse, a number of nurses to provide 24-hour care and 1 permanently available driver.

A provisional estimate of the cost of the foregoing to the Government, to be considered as matching expenditure in the first year, is as follows:

installation costs for all four centres	-	\$52,000
annual maintenance for all four centres	-	52,000
		<u>\$104,000</u>

b) Laboratories for Syphilis Serology

- i) extend this programme to all of its existing centres for the care of mothers and children
- ii) provide adequate space for the 2 central laboratories and provide all furnishings, services, equipment and supplies other than those provided by UNICEF
- iii) establish a central registry in the Dermatology and Venereology Section of the Public Health Department of all cases of syphilis, as has been successfully done for leprosy. WHO standard record cards will be adopted.

/iv. Trace contacts

- iv) trace contacts of all infected pregnant women and diagnose and treat them where required. The treatment of such contacts will be with penicillin to be imported by the Government until the two national penicillin plants can manufacture a product to WHO specifications for syphilis treatment, which the plants will be encouraged to do as soon as possible.
- v) apply the dosages to the different categories of patients in accordance with WHO norms.
- vi) adopt progressively the use of PAM or other WHO-approved penicillin as standard treatment for syphilis
- vii) ensure the cooperation necessary for the success of this programme of the Health Insurance provincial authorities, the "Consejo Nacional de Protección de Menores" the "Auxilio Social" and any other organisations concerned.

A provisional estimate of the cost of the foregoing to the Government, to be considered as matching expenditure in the first year, is the equivalent of \$40,000.

c) Anti-Trachoma Campaign

- i) all supplies and equipment necessary to the project other than that supplied by UNICEF.
- ii) Personnel as follows:
 - 1 Co-ordinating officer - based on the National School of Public Health, Madrid
 - 1 Full-time ophthalmologist
 - 1 Part-time ophthalmologist or physician with training and experience in eye diseases to be in charge of each anti-trachoma dispensary
 - 50 nurses or nursing-aids with suitable training
 - 1 secretary/driver for the full-time ophthalmologist
- iii) necessary facilities for storage and distribution of supplies and equipment
- iv) buildings, dispensaries and all other installations necessary for the project

/v) maintenance and

- v) maintenance and fuel for vehicles
- vi) material for health education, including a mobile cinema projector, also provision in the budget for credits necessary for the subsequent development of health education.
- vii) all facilities for surgical treatment as may be necessary in individual cases

A provisional estimate of the cost of the foregoing to the Government, to be considered as matching expenditure in the first year, is the equivalent of \$30,000.

Target Time Schedule

33. The proposed calendar of action in all three projects is keyed to the delivery of UNICEF supplies and equipment in the first quarter of 1955 and the start of the new work in the early summer of that year.

UNICEF Agreement and Representation

34. The basic agreement between the Government of Spain and UNICEF was signed in New York on 7 May 1954. For the present, UNICEF will be represented in Spain by visiting officials from the Regional Office in Paris.

Recommendation

35. The Administration recommends, subject to the availability of funds:

- a) an apportionment of \$90,000 to Spain from the Europe Area allocation, for the provision of supplies, equipment and transport to assist the Government of Spain in the development of certain maternal and child health services as outlined above; and
- b) that the Administration be authorised to approve plans of operation as outlined above.

MATERNAL AND CHILD HEALTH SERVICES IN SPAIN

ANNEX I

