

THE ROLE OF PUBLIC INSTITUTIONS IN IMPROVING HEALTH IN MOROCCO

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I would like to thank the Italian government and particularly the Director of this Institute, Professor F. Pocchiari, for inviting me to attend the celebration of the 50th anniversary of this Institute and for providing me with the opportunity of talking, in front of colleagues from different parts of Europe, about the role of public health in Morocco.

Ladies and gentlemen, Morocco is one of the developing countries. It is located on the north-west coast of Africa, its area is about 100,000 km². Its population is 20 million inhabitants: 50 % of this population is less than 20 years old, 65 % live in rural areas. As you know, Morocco has been facing different problems of health such as: communicable diseases, water, sanitation, and infant mortality; this is why, the Moroccan Ministry of Health has been firmly engaged in an important sanitary program with international cooperation: 80 % with WHO, 20 % with UNICEF, PNUD, FNUAP, USAID. This sanitary program is concerned with the following aspects:

- development of health services;
- elimination of diseases;
- planning and management of health environment;
- development of health personnel.

Development of health services

The development of health services regards the following aspects:

- primary health care;
- protection against accidents;
- rehabilitation;
- appropriate health technology;
- family health;
- health education;
- prophylactic, diagnostic and therapeutic substances.

Following the recommendation of the WHO responsible for the prevention of accidents and emergency services, a national plan has been established; a channel for telecommunication has been set up and extended to 100 km around the capital Rabat. A national seminar has been planned to cover all the aspects of road accident prevention.

As for the appropriate technology for health, the Danish model of basic radio equipment (BRS), which was tested in Greenland, will be integrated in the Moroccan system of primary health care. Three BRS will be installed in the following Moroccan cities: Agadir, Settat and Rabat. The WHO responsible for the appropriate technology is in charge of determining its evaluation.

Next, family health: infant death is still high in Morocco — from 13-16 % to 50 % is due to dirty water; so a national study has been scheduled to determine the causes of this infant mortality, in cooperation with UNICEF and WHO. This program fits in the framework of WHO's targets, especially the one aiming at reducing the infant mortality to 50 % by the year 2000.

Another aspect is health education; health education is essential for helping the population to understand what is the role of the Ministry of Health, what can the Ministry of Health do for the population, and what should this population do, or what it should not do in the context of health. To reach this goal, on the one hand, the WHO Collaborating Scottish Education Center has been twinned with the Moroccan Health Education Center. This Moroccan Center will largely benefit from this. On the other hand, the Moroccan Center has acquired a set of equipment such as video tapes and portable material.

Elimination of diseases

The program launched by the Ministry of Health aims at the surveillance of:

- epidemiological surveillance of communicable diseases;

- diarrhoea diseases;
- acute respiratory diseases;
- malaria;
- schistosomiasis;
- communicable ophthalmia;
- oral health;
- mental health.

Epidemiological surveillance of communicable diseases, reducing diarrhoea diseases, meningitis diseases and schistosomiasis: a new project for improving the national system of sanitary health is already in use in order to make sure that the collected data are reliable. Moreover a notification system (by phone or telex) has been set up in some Moroccan areas.

The diarrhoea diseases control is also a part of Moroccan primary health care. Sanitary education, salt rehydration distribution are regularly in use in different dispensaries. The Moroccan Department of Health has started to produce this rehydration salt under the supervision of the Central Pharmacy and Drugs Laboratory. A study cost-advantage of this salt rehydration has been done in some Moroccan hospitals and the results are encouraging. Now we are considering its home distribution and its assessment in relation with infant malnutrition.

According to schistosomiasis surveillance, the work accomplished by a WHO team has proved to be of great interest for the Moroccan Ministry of Health, and this is why we have decided to use its new equipment for Tropical Disease Research (TDR). This equipment has been already used for urine filtration in many centers in Morocco.

The Schistosomiasis Danish Center is in charge of training Moroccan Health personnel who will be responsible for different centers in Morocco. This schistosomiasis prevention program will be assessed by the WHO responsible by the end of 1984.

A laboratory equipment is expected to be given by WHO. It will be used for the streptococci and staphylococci disease control.

A portable laboratory for *rapid diagnosis of infectious diseases* is in its experimental phase in Morocco under our supervision: this is a portable kit for coagglutination tests.

The kit has been used for the detection and identification of infectious diseases. This portable laboratory system is contained in a sturdy plastic case. It weights about 13 kg, and occupies a small space.

Primary equipment in the kit includes a microscope, electrophoresis apparatus, incubator-water-bath, and a water purification device. Associated supporting instruments and supplies are all included. Reagents are divided into two categories: a basic set of general applicability and specialized reagents.

This coagglutination test detects not only living bacteria but also dead bacteria and soluble anti-

gens. Therefore, this method can be used in situations where conventional culture diagnosis methods cannot.

Retrospective diagnosis of several meningitis outbreaks was accomplished in this study by using coagglutination test, with cerebrospinal fluid specimens that had been stored in refrigerator or at ambient temperature for many days or months.

Rapid diagnosis coagglutination test was compared with the conventional diagnosis method for meningitis. The coagglutination test was simple, less expensive and more accurate by comparison.

Planning and management of health environment

The management of health environment deals primarily with water and sanitation program and food safety.

The water and sanitation charter has been elaborated by the Moroccan government and a Supreme National Council presided by His Majesty Hassan 2nd; this charter contains three projects:

- national plan of sanitation;
- hygiene in the urban perimeter;
- evacuation of human excrements and wastes in rural areas.

The following three projects have been financed by the PNUD:

- water supply for small cities;
- drinking water quality improvement;
- water supply in rural areas.

Some rural population living in remote areas, without water supply, use polluted well water.

The Ministry of Public Health has decided to use a system of continuous water disinfection by the means of "Chlorine in pot". This system has proved to be very helpful in providing the rural population with continuous disinfected water at a low cost. In fact, this system does not cost much, it can be installed inside a well, a big container, or reservoir of water. The chlorine in the pot is renewed each period of 15 days (Fig. 1). The system has proved to be of great effectiveness. Other systems are under study.

Development of health personnel

The improvement of health personnel concerns the following aspects:

- nurse cure;
- scholarship;
- sanitary legislation;
- research promoting.

The Ministry of Health is interested in getting the WHO equipment which will be used in training centers (HEPS). A pedagogical seminar was held in Marrakech last year with the participation of many medical teachers; other seminars are planned to be held in Morocco in the future.

As for nurse care training, the Ministry has ordered two dummies with the purpose of teaching the reanimation technique in the nurse care training centers.

Ladies and gentlemen, I have just finished talking about some aspects of the role of public institutions in improving health in Morocco. I hope to have communicated to you the effort that has been made by the Moroccan government in different fields of health, in order to meet the wish of WHO which has always worked towards "Health for All" by year 2000. In Morocco we are aware of the fact that the success and achievement of this noble mission depends on the international collaboration.

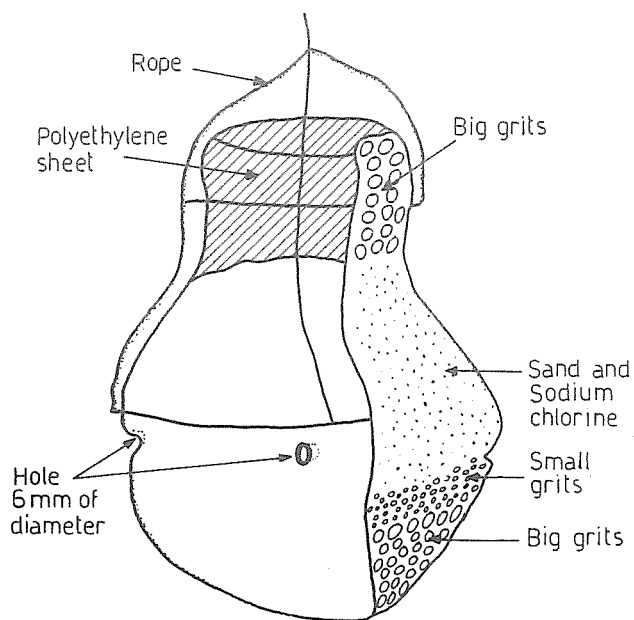


Fig. 1. - Chlorine sprayer