Public Health Progress in Puerto Rico

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PUERTO RICO has witnessed a dramatic improvement in the health of its people in the last 20 years. The general death rate decreased from 18.4 in 1940 to 6.8 per 1,000 in 1961. Life expectancy increased from 46 years to 70 years during the same period. Malaria has been eradicated. The tuberculosis death rate decreased from 260 to 25 per 100,000. Infant mortality decreased from 113 to 42 per 1,000 live births. The five most important causes of deaths in 1940 were diarrhea and enteritis, tuberculosis, pneumonia, diseases of the heart, and nephritis. In 1961 they were diseases of the heart, cancer, vascular lesions affecting the central nervous system, diarrhea and enteritis, and accidents.

This improvement in health has been paralleled by a similar dramatic improvement in socioeconomic conditions. Illiteracy has practically disappeared, and today all children of elementary school age go to school. The annual per capita income has increased to $700. It was around $120 in 1935. It is impossible to say whether the improvement in health led to improvement in economic and social conditions or vice versa. It can be said that as health improved, socioeconomic conditions improved, and as socioeconomic conditions improved, health improved.

In 1940 Puerto Rico was engaged in a vigorous campaign against tuberculosis, malaria, hookworm, and enteric diseases. The administration of public water supplies was centralized under a single authority entrusted with the responsibility of improving and expanding public water supplies in urban and rural areas. There was a forceful antimalaria campaign using all the methods known at the time. Tuberculosis clinics for casefinding, ambulatory pneumothorax, and other treatment offered services throughout the island. The organization of local health departments in every municipality had been completed.

As inroads were made on the main causes of disease and deaths, the economic indexes began to show improvement. When new drugs or methods of treatment became available (DDT and antibiotics, for example), the organization for making them available to the entire population existed, and little time was lost in taking advantage of their benefits. As the economy improved, the moneys available for health work increased. In 1940 the total budget for the central government was less than $29 million. In 1963 the budget for the Puerto Rico Department of Health and Welfare—including welfare but excluding Federal grants—amounted to almost $44 million.

Education in Public Health

Education and training in public health has grown in importance. The School of Tropical Medicine of the University of Puerto Rico was founded in 1926. Its primary aim was to conduct research on tropical diseases prevalent in the island. The diseases studied most intensively were malaria, hookworm and other intestinal parasitoses, enteric diseases, schistosomiasis, and sprue. Great emphasis was also given to the study of nutrition in the tropics.

In 1940 a department of public health was

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created in the School of Tropical Medicine, and training of public health personnel was started. More consideration was then given to the best way to face the public health problems of Puerto Rico.

The School of Tropical Medicine served as the nucleus for the School of Medicine of the University of Puerto Rico which was created in 1950. The School of Medicine has as its objectives the "training of competent physicians devoted to the general practice of medicine, research in tropical medicine and public health, and continuing education." The department of public health of the School of Tropical Medicine became the department of preventive medicine and public health of the medical school. It was responsible for undergraduate as well as the graduate teaching in public health. It was assumed from the beginning that the medical school would better serve Puerto Rico if its students were specially well trained in public health at the undergraduate level.

Planning

Since 1940 the Commonwealth of Puerto Rico has had a planning board responsible for formulating a 6-year plan, which is revised annually. The board estimates the resources that may be available to the Commonwealth government and assigns priorities to the needs. Through this plan a balance has been maintained between programs that lead to increased productivity and the social services that are made available to the people. Health has always been given a high priority by the planning board but because of tradition and for humanitarian reasons rather than because of a firm conviction, which I hold, that health contributes to the island's economy.

The American States have recently approved two basic documents, the Act of Bogota and the Charter of Punta del Este. Both documents deal with national development and both refer to the need for national development plans. The Act of Bogota in its preamble recognizes "that economic development programs, which should be urgently strengthened and explained, may have a delayed effect on social welfare and that accordingly early measures are needed to cope with social needs." It also recognizes "that the success of a cooperative program of economic and social progress will require maximum self-help efforts on the part of the American Republics and, in many cases, the improvement of existing institutions and practices, particularly in the fields of taxation, the ownership and use of land, education and training, health and housing."

It is very important to design a methodology that will demonstrate to the satisfaction of all, but especially of the economists, how investments in health result in the improvement of a nation's economy. This need is specially vital in developing countries where resources are limited and other services generally absorb so large a proportion of national budgets that health services' support is meager compared to needs.

The type of health service that a developing country requires and can afford, and the service's relationships to social conditions and to the economic development program, is a concern of the public health worker. It is recognized today that a developing country must carefully plan the deployment of its resources if its efforts are going to meet with success. The scarcer the resources and the lower the economic level of the country, the greater need for planning.

Planning in health must include provisions for the preparation within the country of most of the personnel who are going to provide services. This is a costly, long-term proposition, yet it is essential to permanent progress.

Integrating Curative and Preventive Services

In countries with few economic resources governments have responsibility for preventive as well as curative health services, and it is not possible to separate the two as has been customary in the United States. Emphasis must be given to preventive services, but curative services are also needed.

In Puerto Rico the department of health is responsible for preventive health services to all, for the provision of medical and hospital care to about 60 percent of the population who are unable to purchase private health care, and for the administration of a social welfare program of public assistance, child welfare, and general social services.

Until 1935 the insular health department had been responsible mostly for preventive services and the local municipal governments for the provision of medical and hospital care to the indigent. In 1935 Dr. Joseph Mountin was invited to conduct a study of illness and medical care in the island and advise on how to improve the existing services. The following paragraph from his report summarizes his findings and recommendations.

"It must be understood that a complete medical service will cost several times what is now being spent. But if it is conceded that stationary or only slightly increasing budgets are to be expected, then there is no other recourse except to do what may be possible toward decreasing the burden of illness by applying preventive measures, and by providing the type of medical organization, freed of present local restrictions, which will function at the highest possible level of efficiency. A very marked reduction in the present sickness burden could be effected by bringing under control such preventable conditions as malaria, hookworm, dysentery, and tuberculosis and by improving the nutritional status of the population. Greater efficiency (referring to medical care and hospital care) should result from a scheme of organization, professional in character, which should be permitted to develop at least certain elements of services on a district basis."

As I have already mentioned, intensive programs against enteric illness, tuberculosis, malaria, and hookworm disease were carried out with success.

As morbidity and mortality began to decrease, public demand for improvement of medical care and hospital services made itself felt. The insular government began to participate in the provision of medical and hospital care in 1938 by the construction and operation of five district hospitals to complement the municipal medical care services. Patients who could not be cared for locally were referred to these hospitals. The hospital services of the health department were totally independent of the public health services. The United States' pattern of complete separation of curative and preventive services was followed, although the department was operating both services.

In 1949 the concept of a local health center consisting of the public health unit, the local, municipally operated, medical-care hospital unit, and the local public welfare unit was conceived, and its implementation was started by housing the three units together. It was soon found that putting these services under the same roof did not result in the coordination and collaboration that had been expected. In 1954 the health department asked the department of preventive medicine and public health of the medical school to conduct a study of the services in a region served by one of its district hospitals where a number of local health centers were located. This study was conducted with the support of the Rockefeller Foundation under the leadership of Dr. John B. Grant. The department of health asked this question: Are the available resources in personnel, facilities, and operating costs for health services in this area being used efficiently? If not, how can they be?

This study took into consideration the changes in mortality and morbidity that had occurred in Puerto Rico, the existing demand by the public for improved health services, the fact that the improved economy of the island permitted improved health services, and the tremendous progress that had been made in the diagnosis and treatment of many diseases. The important question, of course, was how good and comprehensive a service could people with a per capita income of around $550 per year at that time provide for themselves?

These basic recommendations resulted from the study and are now being implemented:

1. Integrate curative and preventive health services for the 60 percent of the population that depend on the government for medical and hospital care. Continue providing preventive services separately to the remaining 40 percent, hoping that private medicine will eventually incorporate preventive personal services as the government program demonstrates the advantages of such an incorporation.

2. Establish an intimate relationship between social welfare services and health services. Identify the conditions when a health problem leads to a social problem and those when a social problem results in a health problem, and design the methodology for dealing with them.

To facilitate the implementation of these two decisions, health and welfare services have been

decentralized and organized in five regional health and welfare services. The regional hospitals are the headquarters for the Regional Health and Social Welfare Services.

Through this system we are trying to make available to the public an integrated health and social service provided by generalized personnel at the local level in the health centers. These staffs are backstopped by specialists at the regional level. The service relationship, in addition to consulting services and a continuing educational program for both professional and administrative personnel, maintains the system operating as a system.

Developing countries cannot be expected to separate preventive and curative health services. In teaching and research more consideration needs to be given to the operation of integrated comprehensive health programs compatible with a nation's economy. Personnel and economic resources must be used in a way that will permit governments to meet the urgent demands for the care of the sick and, at the same time, concentrate efforts on preventive programs.

Physical, Emotional, and Social Well-Being

Our experience in Puerto Rico with a combined department of health and welfare has been interesting and stimulating. The new developments in mental health and the social sciences, the new knowledge of human behavior, and the more promising theories on how to deal with social pathology make me believe that the definition of health in the constitution of the World Health Organization may yet be quite realistic. Perhaps the authors of the definition of health as "a state of physical, emotional, and social well-being" were forecasting for us.

In the Puerto Rico Department of Health and Welfare we feel we are participating in a concerted effort toward promoting the state of physical, emotional, and social well-being of the Puerto Rican people. We are discovering areas where the physical, emotional, and social factors have to be well understood for effective planning and proper development of action programs.

Problems such as juvenile delinquency, narcotic addiction, alcoholism, care of the aged, and dependency have physical, emotional, and social aspects. So do tuberculosis, venereal diseases, cardiovascular diseases, cancer, and arthritis. Facing these problems requires a team approach by personnel well versed in the three aspects. The future generalist in health will need the basic information that will permit him to recognize the symptoms of emotional and social pathology as readily as he recognizes physical pathology today.

In public health and medicine we are accustomed to depending on scientific knowledge in developing our activities. It is difficult for us to accept a less secure basis for program planning, although we must frequently do so in mental and social service programs. To deal successfully with the health problems we are now facing, we need to experiment with existing knowledge and theories in the behavioral sciences. On the whole, and now I am wearing my hat as director of a social welfare program, as we learn more about social problems, we find that the techniques and the approaches that have been developed in public health can be profitably applied to social problems. The multidisciplinary characteristics of public health personnel are a definite advantage.

To conclude, although I do not believe that ideas and systems can be successfully transplanted without careful consideration of the need for adaptation, I think the experience of Puerto Rico in planning for health and national development, in integrating preventive and curative services, and in emphasizing emotional and social as well as physical well-being is pertinent to other developing countries.