

enzyme acts on the substrate and it is revealed by a colorimetric reaction.

- *RIA* (radioimmunoassay). The test consists in fixing the antibodies for the bacterium tested for on a surface. The pathological specimen and specific antibodies, labeled with  $^{125}\text{I}$ , are then added in turn. If the antigen is present, labeled antibodies remain and radioactivity is observed.

Persons interested in obtaining additional information on these tests should get into touch with the Laboratories Program, Division of Disease Prevention and Control, PAHO.

(Source: Laboratory Program, Division of Disease Prevention and Control, PAHO.)

## Risk Approach in the Extension of Health Service Coverage

The idea that certain individuals or population groups are more likely to become ill than others dates from very remote times. More than 120 years ago, Little drew attention to the influence of specified conditions and antecedents of a mother on the mental and psychological health of her child and identified the first risk factors in perinatal morbidity. However, it is only since the second half of this century that systematic epidemiological studies based on the idea of prediction which characterizes risk studies have been carried out.

This approach is valid for all health activities, but it is especially used in primary health care programs and has been developed most fully in maternal and child health care and in particular perinatal care. Women and children, the vulnerable groups of the population, are exposed to special risks arising from the processes of reproduction and of growth and development, respectively. For example, it has been observed that certain characteristics of a mother such as advanced age, multi-parity, presence of diseases, and complications of earlier deliveries are associated with an unfavorable course of pregnancy.

While some of these characteristics are probably of universal importance, other risk factors may be present in different countries or regions and need to be identified through epidemiological studies.

Although maternal and child health indicators show that there has been a substantial improvement in the situation in the past decade, there are still many communities in the Region in which conditions are below the minimum acceptable and for which special efforts are required, including the application of the risk approach.

To develop this approach, each community or area needs first to define its own priority problems, to analyze them from an epidemiological point of view, and to reach an understanding of their "etiological chain." The next step is to decide, in the light of such criteria as feasibility and viability, where to intervene in that chain to change the undesirable results. For that purpose, existing re-

sources will have to be reassigned and frequently others that are not traditionally considered health resources will have to be mobilized.

An essential part of this process consists in defining the characteristics of the individuals or groups "at risk" so that they can be promptly identified and appropriate measures taken.

The assignment of risk figures to individuals, families, and communities makes it possible to develop appropriate strategies and to reassign resources for averting or reducing undesirable results. The risk approach is therefore a management strategy that can improve the design of health services and the mobilization of community resources for promoting its health and preventing disease.

Since the beginning of the past decade it was understood how valuable the risk approach could be, especially if it were possible to develop a methodology enabling it to be systematically applied to the rationalization of the use of health resources. In 1977 WHO convened an expert group whose discussions laid the conceptual groundwork for the use of this method. Since 1978 experimental studies based on the approach advocated by WHO and PAHO have been initiated in a number of the countries. These studies have resulted in operational guidelines that will make it possible to systematize the method of study and application of the risk approach. In April 1980, an interregional workshop held in Nottingham, England, spelled out the methodological basis of the approach and wrote a manual that is being published. In March 1981 PAHO organized in Bogotá, Colombia, the First Regional Meeting on the Risk Approach in the Extension of Health Service Coverage. It was attended by representatives of 15 countries in the Americas who reported on the various experiments underway in the countries.

The studies on this subject made in the Americas have been of two types:

- Those that have followed all the stages of the methodology

advocated by WHO, beginning with an epidemiological study at the local level designed to identify the risk factors and subsequently strictly following the methodological steps (such as the investigation carried out in Cuba and that being undertaken by the Latin American Center for Perinatology and Human Development).

- Those that have been initiated with the preparation of a predictive model in which the risk indicators are selected on the basis of other experiments and the initial weighting is established by appraisal. The periodic evaluations of the predictive value of the model and of the weight of each of the indicators

are used to adjust it in successive approximations (such as the studies made by the Javeriana University in Colombia).

In addition to the above, other studies of interest have been made in Latin America and there is a wide literature on the subject. Those interested in obtaining further information may contact the Maternal and Child Health Program, Division of Comprehensive Health Services, PAHO.

## Reports of Meetings and Courses

### International Course in Epidemiology

This course, which was held from 21 September to 9 October 1981 in Guatemala City, was sponsored by PAHO and the U.S. Centers for Disease Control (CDC). It was attended by professional health workers working as epidemiologists at the central or regional level in Costa Rica, Dominican Republic, El Salvador, Guatemala, and Honduras.

The course included group discussions, theoretical presentations and exercises on diseases in the population, quantification of health problems, arrangement and presentation of data, statistical methods, epidemiological surveillance, epidemiological investigation, epidemiology and nutrition, epidemiology of chronic diseases, disease control, epidemiology, and evaluation of health programs.

A field study carried out during the final week consisted of an epidemiological survey in a district of Guatemala City.

The course was based on "Principles of Epidemiology for Disease Control" prepared by PAHO, supplemented by discussions of exercises prepared by CDC. Technical personnel from the PAHO Area III Office in Guatemala and from the CDC served as course instructors.

### XXVIII Meeting of the Directing Council of PAHO

In its XXVIII Meeting, held in Washington, D.C., from 21 September to 2 October 1981, the Directing Council of PAHO was informed of the dengue situation, which led to the approval of the following resolution:

#### THE DIRECTING COUNCIL,

Aware that the presence of *Aedes aegypti* in many American countries, the endemicity of dengue in some of them, the emergence of hemorrhagic forms of the disease, the persistence of sylvatic yellow fever, and intensified movements of people and goods within and between countries pose a real risk of an outbreak of dengue epidemics that could spread into hitherto untouched areas, and of a recrudescence of urban yellow fever,

#### RESOLVES:

1. To request the Director to organize a technical group that would include among its members representatives of the most severely affected countries to study the problem and propose possible alternative courses of regional action for the eradication of *Aedes aegypti* and other approaches to controlling dengue and for dispelling the threat of urban yellow fever in the Hemisphere.
2. To request the Director to present the proposals of the technical group to the XXI Pan American Sanitary Conference.

#### Editorial Note:

At this printing the situation in the Caribbean as to dengue hemorrhagic fever is as follows:

The epidemic in Cuba is practically under control. Cases in the country since the outbreak of the epidemic number 343,924, of which 156 ended in death. No case of hemorrhagic dengue has been reported from any other country in the region.



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