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**INTER-AMERICAN INVESTIGATION OF MORTALITY IN CHILDHOOD**

Report for July 1 - December 31, 1969

to the

Agency for International Development

During this six-month period efforts continued with field work to assist the staffs of the projects in improving their procedures for collecting and completing the questionnaires for children under 5 years of age. Also by the end of the period, coding of the questionnaires was under way so that punch cards, tapes and tabulations could be prepared for analysis of the material. Some of the products of the Investigation, however, are already evident in the introduction of new programs in some of the areas. Brief descriptions of these activities will be given.

Activities of Central Office

Twelve projects received visits of Dr. Serrano and/or Miss Dillon of the Central Office during the six-month period. In addition, Dr. Serrano visited the project in California, which was initiated in July 1969, in regard to the medical problems related to multiple causes of death. The principal collaborator indicated that the Investigation in California was already revealing important and useful information.

The project in the new medical school in Sherbrooke, Quebec, Canada will be initiated in January 1970 and Dr. Puffer will visit the project at that time to assist in the establishment of comparable procedures.

The junior statistician resigned and a replacement was secured. The Central Office staff has been involved with provisional analyses and with transfer of information on the questionnaires to code sheets for deaths that occurred during the first 6 or 8 months of the Investigation. Tabulations will be prepared by computer for analyses for a document to be used for the

meeting of the Advisory Committee on Medical Research in June, 1970. Both social and medical coding are time consuming and careful planning will be necessary to complete this phase of the program. Copies of the code and code sheet are attached.

Activities Resulting from the Investigation

The excessive mortality from measles in several of the projects in the first few months of the Investigation indicated that vaccination programs should be introduced as soon as possible. Through the Pan American Development Foundation, 27,500 doses of measles vaccine were obtained and used in the areas of the Investigation in Recife, Brazil by the Department of Public Health. Of the 31,945 children from 8 months to 4 years of age 25,915 or 81 per cent were vaccinated. In addition 16,125 children in other sectors of Recife were vaccinated. A summary of the report on this measles vaccination campaign in Recife, which was conducted by Dr. Eliane Gonçalves, is attached. A request for the vaccine needed for a second year of attack and maintenance phases of the program in Recife has been sent to the Pan American Development Foundation through the regular channels.

The principal collaborator in La Paz obtained 17,000 doses of measles vaccine through the Brother's Brother Foundation. In several other areas, measles vaccine is now being used by the health authorities. Thus there should be lower death rates from measles in the second year of the Investigation.

Improvement of pediatric pathology is considered a necessary by-product of the Investigation. In most of the areas a marked improvement in the quantity and quality of autopsies is taking place. For example, in San Juan, Argentina, where almost no autopsies were being performed in the early months of the Investigation, an increase to approximately 40 per cent of the deaths has been observed. The table below shows the number of autopsies performed by month.

Number of Autopsies in San Juan, Argentina  
August 1968 - October 31, 1969

Month	Number	Month	Number	Month	Number
1968		1969		1969	
August	1	January	6	June	41
September	6	February	6	July	37
October	8	March	14	August	60
November	7	April	21	September	42
December	4	May	30	October	53

This progress is due partly to a recommendation from the coordinating meeting of health authorities and medical educators in Buenos Aires in March 1969 that two residents in pathology from the University of El Cuyo be assigned to San Juan.

Although pathology services have improved, the pathologists have expressed the need for more definitive orientation in pediatric pathology and for standardization of criteria among those participating in the Investigation. Plans are being made with the Department of Human Resources of the Organization to arrange two workshops which will be conducted by an expert in pediatric pathology for five pathologists at each one. Long-term aspects of the promotion of pediatric pathology are also being planned.

The discovery of unregistered deaths in the first few days of life in San Juan has indicated the incompleteness of death registration in that area and probably in other areas of Argentina as well. This was reported by the principal collaborator at a meeting of the provincial ministers of health. The standards and procedures used in San Juan to detect these unregistered deaths are being recommended for use in the other provinces in order to improve registration of infant deaths and thereby yield more accurate official statistics.

The uneven distribution of deaths in La Paz by zones of the city has led to the establishment of a health center in the zone from which the largest number of deaths has been reported. Previously, the residents of this zone had to travel to other parts of the city to seek medical attention. Thus, many children lacked health supervision and preventive health services which are now being made available.

#### Contribution of Investigation to WHO Programs

Dr. Serrano participated in three meetings convened in Geneva by the World Health Organization. At the meeting on Growth and Development arranged by the Maternal and Child Health Section of WHO he described the procedures carried out in the Investigation. For the Working Group on Multiple Causes of Death a paper\* was prepared outlining the procedures used to designate the underlying and associated causes of death as well as giving preliminary tabulations of underlying and associated causes in nearly 2,000 deaths from three projects. A paper\* on the role of the Regional Office in the 1975 Revision, a reference document for the third meeting in Geneva, included recommendations from the Inter-American Investigation of Mortality in Childhood.

\* Copy attached

The Investigation will contribute to the planning of the 1975 Revision of the International Classification of Diseases in relation to multiple causes, the section on nutritional deficiencies, tabulations of perinatal causes and medical terminology in use in three languages. Material will be available from three projects with medical data in English, from three with such data in Portuguese and from nine in Spanish.

#### Agreements

Agreements have now been signed for the continuation of the field work through the 27 months. In accordance with the schedules, the field work will be completed in the latter half of 1970 in all 13 projects.

#### Other

For the monthly magazine 'War on Hunger' of the Agency for International Development a short paper was prepared which was included in the November-December 1969 issue. A copy of this issue is attached.

As pointed out from the preliminary analyses and in the previous report, probably the most important finding of the Investigation thus far is the recognition of the seriousness of nutritional deficiency and the high proportion of deaths in childhood in which nutritional deficiency is one of the causes contributing to death. Efforts are needed to establish planning for adequate nutrition and for provision of foods, including sufficient protein, as part of local health programs. Through the nutrition adviser of the Organization and the World Food Program, planning is expected in this field for action in the areas where the projects of the Investigation are located.

#### Attachments

1. Code Sheet and Code for the questionnaire on deaths.
2. Vaccination Campaign against Measles in Recife. Summary of Report submitted by Dr. Eliane Gonçalves.
3. Study of Multiple Causes of Death in the Inter-American Investigation of Mortality in Childhood. Paper prepared by Carlos V. Serrano, MD for the WHO Meeting on Multiple Cause Analysis.
4. Program for the Ninth Revision of the International Classification of Diseases. Role of the Regional Office for the Americas.
5. Inter-American Investigation of Childhood Mortality - R.R. Puffer and C. V. Serrano, 'War on Hunger' VM III November-December 1969. p. 14-17.