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ACUTE RESPIRATORY INFECTIONS PROGRAM IN PAHO/WHO

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ACUTE RESPIRATORY INFECTIONS PROGRAM IN PAHO/WHO

PAHO activities for control of acute respiratory infections in the Region started soon after their inclusion by the 7th. Program of WHO into the responsibilities of the tuberculosis unit. In 1980, a Regional Seminar was held to discuss the problem and in connection with a PAHO training course on respiratory virus in Rio de Janeiro (Fundação Oswaldo Cruz), a meeting of experts was convened in Brazil to prepare a draft for research studies.

The strategy which has been adopted in recent years focuses on the following:

1. Motivation and provision of information on ARI to national health authorities and other professionals involved in respiratory diseases, mother and child health programs and epidemiology.
2. Preparation of recommendations for norms, standardized procedures, low cost drug regimes and treatment algorithms for use in ARI control programs at national level.
3. Preparation of training materials on management of ARI for use by nursing and auxiliary personnel.
4. Reinforcement of laboratory capability for studies on the causative agents in ARI.
5. Inclusion of ARI control activities among the priorities of the Primary Health Care system.
6. Implementation of projects to reduce ARI mortality in children in selected areas.
7. Promotion of research to determine the burden caused by ARI in terms of morbidity, mortality and utilization of the health services.
8. Promotion of epidemiological surveillance of ARI in selected populations in order to establish true incidence rates and the magnitude of the problem as well as the socioeconomic and cultural determinants.
9. Promotion of hospital or population based research studies on the etiological agents and clinical correlates of ARI.
10. Application of the results of research to improving national programs and developing national recommendations.

Most of these are already being implemented in one or more countries of the Region.

The research aspect of ARI control has received high priority in PAHO. The PAHO Advisory Committee on Medical Research established a subcommittee on ARI and Resolution XXIII of the 21st. Meeting of the Pan American Sanitary Conference recommended *inter alia*,

"that within available resources, including new available extrabudgetary funds, the Director strengthen the capacity of the Organization to deliver technical cooperation in the countries in the area of health research and to give high priority to those research issues addressed by the Advisory Committee, particularly the area of acute respiratory infections in children."

The coordination of the program at the moment rests with the Regional Advisor on Acute Respiratory Infections (ARI) and Tuberculosis, as a component of the Maternal and Child Health Program (HPM/TRI), together with Diarrheal Diseases Control and EPI. Close coordination and collaboration has been achieved with Research Coordination (DRC), Epidemiology (HCE) and Laboratory Services (HSA).

#### Present Situation

A PAHO/WHO analysis of mortality rates in children by country for the whole Region (PAHO Epid. Bull. 1 (5): 1-4, 1980) showed a serious problem in Latin America, with rates near 1,000 per 100,000 in Continental Middle America and Tropical South America for children under one year old, around 1976. In the north (USA, Canada, Cuba) and southern cone (Argentina, Chile, Uruguay) mortality due to pneumonia in older ages constitutes a similar or bigger problem than in their young children.

PAHO/WHO has also prepared a basic background document on the extent of the problem presented by ARI (Acute Respiratory Infections in Children, 1982, RD/21/3). This points out that the risk of dying from ARI in Latin American children is 30 times higher than in those from North America. The document also describes the microbial agents known to cause ARI, the clinical and management aspects, and the research issues which must be addressed in order to produce further reduction in the morbidity and mortality from this group of diseases.

A high recognition of the problem and information regarding the present technology and strategies for control has been obtained through inclusion of the subject in PAHO periodical publications (Epidemiological Bulletin, and TB and Respiratory Diseases Technical Information Bulletin).

The subject of ARI has been incorporated in the international courses on TB epidemiology and control (Argentina, Brazil, Chile, Cuba, Mexico and Venezuela) and in major national and international conferences.

Hospital based research, to study clinical and etiological characteristics of ARI in Latin America and the Caribbean, was considered the first area to be developed. In Brazil these studies started in Rio de Janeiro and in Belem (Para) with the cooperation of several institutions. In Rio the group at Oswaldo Cruz Foundation was already involved in studies on viral agents of ARI, the inclusion of bacteriology and a standard clinical protocol has been slow due to the need to coordinate different health agencies. In the meantime, a large amount of information has been gathered on the characteristics and load of patients demanding care for ARI, and is now being analyzed. In Belem the same hospital based study is underway, with virology and bacteriology in the same institution.

A protocol based on Prof. D. L. Miller's recommendations, which would allow comparison with studies in other regions, was prepared for a study in Trinidad & Tobago and Barbados, with participation of PAHO/CAREC and the University of West Indies. The study has received a grant from IDRC/Canada in 1982, but has not started pending final approval of the governments involved. This should be obtained shortly.

Venezuela has prepared a protocol for a similar study on children attending urban and semirural health services. Basic data are being gathered and the laboratories and personnel are prepared to start in the second semester 1983. A hospital based study has begun in Costa Rica on the etiology of ARI in small children and PAHO is assisting groups in Uruguay, Panama, Cuba and Argentina to initiate similar studies.

Because one of the weaknesses in our Region is in the diagnosis of the etiologic agents, several countries (including Argentina, Brazil, Mexico, Uruguay and Venezuela) have received collaboration from PAHO/WHO in improving their laboratories, and a regional course on ARI laboratory diagnostic methods was held in 1982 in the Dominican Republic. A similar course is planned for Argentina in 1984.

Other countries have carried out studies on demand of health services and program organization. Mexico has been working for two years in the development of an area for program implementation and operational research. Bolivia has successfully trained auxiliary nurses in the use of decision trees for treatment of moderate and severe ARI. Argentina has prepared materials for training.

As regards program implementation, Brazil and Argentina are revising projects for national norms. In Brazil, the State of Para, with 3,5 million inhabitants, has implemented ARI norms in all official health services in 1982, including a surveillance system. The results are encouraging, and mortality data should soon be available to measure impact of the program.

Three recent meetings were of high relevance to the ARI program. An AID/NIH workshop examined the feasibility of a biomedical research initiative in the developing world in general and Latin America in particular, and emphasized for ARI epidemiological studies and evaluation of treatment regimens which could have immediate impact. The first global TAG meeting in WHO, Geneva concluded that sufficient information exists on the subject to implement national programs simultaneously with current research. A meeting in North Carolina, USA, brought together researchers from various parts of the world to consider the present status and future possibilities. The report of that meeting is attached as Annex 1.

Population-based research is necessary to establish real incidence of severe ARI cases and the factors that influence incidence, treatment, prognosis and final outcome. They are, however, complex and expensive and have not been funded by PAHO. Studies on vaccines are underway in USA.

Research on simple diagnostic methods on easily obtained samples such as urine or drops of blood would be of value for epidemiological research and diagnosis of severe cases not responding to standard treatment. Several investigators have been interested in this area, including LCDC in Ottawa, Canada.

Finally, supportive treatment with oxygen is the main intervention in small children with severe viral respiratory disease. Appropriate technology could contribute to make oxygen accessible to health centers in rural or periurban areas at low cost and this problem has yet to be faced.

#### Strategy for the future

The major activities of PAHO/WHO will be directed towards the following:

- Further developing and refining a regional strategy for a coordinated effort in research and control of ARI.
- Promoting the importance of ARI with major funding and international agencies.
- Promoting at the national level the implementation and evaluation of strategies which can be applied in the PHC system for reduction of morbidity and mortality from ARI.
- Development of an adequate information system on ARI incidence and mortality for continuous evaluation.

- Providing modest financial support for research projects on ARI.
- Providing technical cooperation to member countries in the field of laboratory diagnosis and provision of reagents.
- Increasing the expertise of consultants and advisors who can provide assistance in Spanish and Portuguese to countries in establishing and monitoring programs of research and control of ARI.
- Providing relevant scientific information to nationals on various aspects of ARI.
- Facilitating training of personnel to work in national ARI control and research programs.