

On the large populations of bacilli actively multiplying at neutral pH on the walls of pulmonary caverns the effect of streptomycin, isoniazid, and rifampin is bactericidal; ethambutol and PAS are bacteriostatic; and pyrazinamide is inactive. The most active drug against the small bacterial population that multiplies slowly inside macrophages in an acid medium is pyrazinamide followed by isoniazid plus rifampin. Streptomycin, like any other aminoglycoside antibiotic, is inactive in acid media.

In solid caseous lesions produced by persistent bacilli that multiply intermittently, only rifampin is bactericidal, all other drugs being inactive.

Consequently, from the bacteriological standpoint, the isoniazid-rifampin combination, which is bactericidal for all these bacterial populations, constitutes the basis for short-course chemotherapy. To enhance the effectiveness of this combination and to avert the consequences of primary and acquired resistance, it is advisable to add one or two supplementary drugs in the initial, intensive phase of treatment.

Effectiveness of Short-course Chemotherapy

From the many studies and controlled clinical trials carried out in the last 10 years in different parts of the world, a few conclusions may be drawn on which there is consensus:

a) The rifampin-isoniazid association is essential in short-course tuberculosis chemotherapy.

b) Streptomycin and pyrazinamide contribute to the success of short-course chemotherapy as supplementary drugs in the initial phase and in therapeutic regimens resorted to when rifampin is unavailable.

c) For patients with bacteriologically confirmed tuberculosis the short-course regimens must last 6-9 months in order to assure 100 per cent effectiveness.

d) It is essential that the initial phase of the short-course chemotherapy be intensive and that the drugs be administered daily.

Adverse Reactions to, and Toxicity of, Antituberculosis Drugs

Though antituberculosis drugs are, on the whole, well tolerated, they can cause adverse effects. However, the number of cases in which treatment has to be discontinued permanently is usually lower than 3 per cent.

Operational Aspects

The supply and distribution system must be so organized as to assure a timely and uninterrupted supply of drugs for application of the therapeutic regimens chosen. Governments must guarantee supply of the drugs free of charge. In view of the economic advantages of centralized drug procurement, establishment of a regional revolving fund, through an international agency, to obtain antituberculosis drugs, is recommended.

Training and Supervision of Health Personnel

The introduction of new chemotherapeutic regimens make it necessary to retrain and upgrade personnel. To maintain the quality and productivity of the program, continuous supervision is essential at the central, regional, and local levels.

Venezuelan Center for the Classification of Diseases (CEVECE)

The Venezuelan Center for the Classification of Diseases (CEVECE), formerly known as the Latin American Center for the Classification of Diseases (CLACE), will serve as the WHO center for this activity in the Spanish language and will have its headquarters in Caracas. This change derives from the fact that there already exists in Latin America another center with the

same name: the WHO Center for the Classification of Diseases in Portuguese, with headquarters in São Paulo, Brazil.

In August 1979, PAHO and the Government of Venezuela, desirous of giving greater emphasis to the work of the Center, signed a new agreement under which the Government of Venezuela would substantially increase

the resources of the Center to enable it to provide greater support to Spanish-speaking countries, in accordance with the principles of technical cooperation among developing countries (TCDC). To achieve this objective, it will serve as a reference center in close collaboration with the other two WHO centers of the Region—the one in São Paulo and the other in Washington, D.C.—as well as with the WHO Unit for the International Classification of Diseases.

In coordination with PAHO, the Center will assume responsibility for all activities connected with the International Classification of Diseases (ICD) in the Spanish language in Latin America. Foremost among these are

the development of human resources through national continuing education courses held at the request of the countries and international courses on coding; the teaching of the ICD in schools of medicine and public health; the preparation of teaching materials for the countries; cooperation in the application of the Ninth Revision of the ICD in the countries and its evaluation; the testing of a system of health reporting by non-medical personnel, of the perinatal certificate, and of the classification of diseases and disabilities; research on the medical terminology of death certificates in Spanish-speaking countries; and preparation, publication, and distribution of a quarterly bulletin.

Courses in Epidemiology and Disease Control, Latin America and the Caribbean, 1980.

Country	Institution	Course title	Admission requirements	Length	Commencement date
Argentina	National Institute of Tuberculosis, Santa Fe	Tuberculosis epidemiology and control	Physician, nurses, laboratory workers	7 weeks	19 September
	Institute of Epidemiology, Mar del Plata	Introduction to syphilis epidemiology	Physicians, nurses, laboratory workers	1 week	11 March
	Institute of Epidemiology, Mar del Plata	Epidemiology	Physicians, nurses, laboratory workers	2 months	15 July
	Institute of Epidemiology, Mar del Plata	Epidemiology and investigation of contacts in sexually transmitted diseases	Technical personnel	3 weeks	30 September
	National University of Córdoba	Epidemiology	Physicians, nurses, laboratory workers, and other health professionals	1 month	4 September
Brazil	Oswaldo Cruz Foundation, National School of Public Health, Rio de Janeiro	Advanced course in epidemiology	Physicians, nurses, laboratory workers, and other health professionals	18 weeks	15 August
	School of Hygiene and Public Health, University of São Paulo	Epidemiology and entomology	Physicians, nurses, laboratory workers, and other health professionals	—	—
Chile	National Institute of Pulmonary Diseases and Thoracic Surgery, Santiago	National course in tuberculosis epidemiology and control	Physicians, nurses, laboratory workers	4 weeks	6 November
	School of Medicine, University of Chile, Santiago	Seminar on clinical epidemiology	Health professionals	2 weeks	10 July
Colombia	University of Antioquia, Medellín	Epidemiological surveillance and disease control	Professional personnel working in health services or teaching	8 weeks	11 June
	University of Antioquia, Medellín	Special course in epidemiology	Master's degree in health planning	5 months	30 June
	University of Antioquia, Medellín	Epidemiological surveillance in nosocomial infections	Health professionals	2 weeks	—
	University of Antioquia, Medellín	Residency in epidemiology	Master's degree in health planning	9 months	2 February