

16-3-1959

# INTERNATIONAL JOURNAL OF LEPROSY

VOLUME 26, NUMBER 2

APRIL-JUNE, 1958

## LEPROSY CONTROL IN THAILAND BY THE PUBLIC HEALTH ROUTE

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Both modern antileprosy treatment and a redefinition of the old concept of leprosy control by isolation presented by the Expert Committee on Leprosy of the World Health Organization in 1953 (<sup>1</sup>), have made it possible to turn from the old main and narrow road of attempted control by isolation to a change of direction—the “public health route”—i.e., a broad rural domiciliary approach to leprosy control.

The WHO Expert Committee agreed, as a basic new principle, that leprosy is not a disease apart but is a general public-health problem in the countries where it is endemic. As we understand leprosy control by the public health route, all specific control work undertaken in a country where leprosy represents a public health problem, to lower its incidence, is carried out as a mass operation by a staff working within the general framework of the health administration of that country, and conforming to generally-accepted public health principles.

But, in apparent contradiction to that definition, we experimentally believe that only a few of the particular methods applied in the control of other public health diseases is applicable in the field for leprosy control. The fact is that leprosy continues to be the most dreaded disease in the public health framework. Its transmission, spread, long incubation and case-finding methods, and its comparatively long treatment, relapses, etc., do not favor particular public health methods of control. Only such measures as will raise the public health standards, e.g., improvement of nutrition, sanitation and housing are likely to help in the control of leprosy.

But the World Health Organization has, strategically, solved these main obstacles and contradictions in carrying out its assisted leprosy programs in the modern rural domiciliary approach by operating at a slow rate of speed. Chiefly, the field strategy for mass control by the public health route is to divide all areas where leprosy is endemic into sections small enough for leprosy work to be controlled and measured.

What WHO calls and defines as "mass control measures in limited areas" includes the following main points:

1. Training program, after selection of personnel of the right type.
2. Leprosy control field operations by the public health route, beginning with a wisely planned survey of the areas—a detailed army map always at hand—where the work is to be done.
3. As the final and main target of leprosy control work in the limited area under concentrated attack, we must carry out the treatment of the actually registered patients by mass chemotherapy.

Keeping these points of field strategy in mind, WHO started action in Thailand by signing, in 1949, a basic agreement with the Thai Government and UNICEF. Field action was prepared for by accurate planning. The first step was to send Dr. Dharmendra as a short-term consultant to Thailand in 1953, to survey the epidemiologic conditions of leprosy in the country and the pilot project area. His report was followed by a definition of objectives and, further, by the preparation of a plan of operations based on both his preliminary findings and the above-mentioned principles of public health route of control in the rural domiciliary approach.

In November 1955, with the assistance of WHO and UNICEF, the Thai Department of Public Health embarked on a pilot project in the Khon Kaen Province of Northeastern Thailand. This project envisaged a demonstration of the modern approach to leprosy control through stationary and mobile domiciliary treatment, case finding, follow-up of cases and contacts, routine bacteriologic examinations, health education on the importance of home isolation, and where necessary institutional isolation and research in collaboration with existing leprosy institutions. It was intended that, with the experience gained in this pilot project, a program of nation-wide expansion should be instituted to bring leprosy under control in all areas where it represents a public health problem.

To date the pilot project, having completed its first phase of operation (the two-year operational phase) at the end of 1957, has achieved the following results:

1. The making of a survey of the whole population of Khon Kaen Province and the detection of the vast majority of leprosy cases in the pilot area. This survey included systematic examination of all school children, followed by the examination of home contacts of cases found, and house-to-house canvassing as far as possible.
2. Registration of 6,750 cases and their treatment and follow-up, and the protection of the contacts. This number of cases represents a prevalence rate of 1 per cent for the area, the population being 650,000. As regards type, 31.5 per cent are lepromatous and 68.5 per cent nonlepromatous.
3. Demonstration, through the successful operation of the pilot project, that the public health route to leprosy control is technically feasible and effective for Thailand.

For the success of this or any campaign, three prerequisites are obvious: (a) availability of funds; (b) personnel of the right type; and (c) cooperation of the public, both the local authorities and the leprosy patients.

The government budget is more than adequate for personnel, salaries, and supplies; the members of the national staff are definitely constant and devoted in their daily approach to the patients; and the patients themselves are constant. We therefore have arrived at the terminal achievement of our project, which is the determining what route must be followed in the national program.

The plan of the national program comprise three phases: (1) an operational (or attack) phase lasting two years; (2) a consolidation phase, also lasting two years, with follow-up surveys and follow-up treatment; and (3) the phase of integration into the general public health services (maintenance). These steps are to be carried out in every selected and limited area of operations, in the provinces where leprosy is endemic. Besides the Khon Kaen area of the pilot project, four other areas are to be dealt with similarly. WHO plans to continue its present participation in this work for a total of ten years.

The pilot project staff has consisted of 25 members: an international WHO medical officer, a national medical officer, 3 sanitarians, and 20 lay health workers. This staff has been found adequate to cover the population of this area, for surveys and case finding, and for treatment and follow-up, etc., of the 6,750 leprosy cases and their contacts. Three UNICEF jeeps and 15 UNICEF bicycles were supplied for the transportation of 3 mobile units (each with a team leader and 2 assistants), and 14 stationary units one of which is attached to each of the existing rural public health centers.

To cover all endemic areas, as well as to keep a satisfactory average of patients following treatment regularly, it has been necessary to combine strategically both treatment centers and treatment methods.

Each of the stationary treatment centers attached to the existing rural health centers has a leprosy assistant, with bicycle transport, who issues oral domiciliary treatment to all patients covered by the center.

The mobile treatment teams, on a fortnightly schedule, carry out domiciliary treatment by injection to all patients residing in areas not covered by the health centers. Laviro's long-acting injectable DDS method has been particularly useful and successful in this country, where there is an irresistible demand for injection therapy. Besides achieving as satisfactory clinical and bacteriologic results as does oral therapy, the preference of patients for the injection method has ensured a high percentage of regularity.

However, in spite of our successful experience with rural domiciliary treatment, we still need the supplementary weapon of the leprosarium. One leprosy hospital and a large leprosy village settlement were established in the pilot area—as they will also be established in every step-area of the nation-wide expansion of the program—to segregate about 1,000 cases requir-

ing special treatment and/or isolation. Leprosaria are also used for research and the training of personnel.

The further plan of operations referred to, with the Khon Kaen pilot project as the basis, for a nation-wide expansion to all areas in Thailand where leprosy constitutes a public health problem was prepared jointly by the Thai Department of Public Health, WHO, and UNICEF. This national program started expansion early in January 1958 to cover, step by step and progressively, the whole country within a period of ten years. Every limited area will be under the operational and consolidation phases (meaning under concentrated attack) for four years, followed by its integration into the general public health services, although a partial integration is carried out from the beginning of the operations by attaching the stationary units to the existing rural public health centers of the provinces. In the first phase the service has to be specialized; in the second phase, as in the Khon Kaen pilot area at present, there is a partial integration and a partial retention of the specialized staff; in the third phase the work will be completely integrated into the general public health work.

The main thing that the experience of the pilot project by the public health route has taught is the very definite and promising result that public cooperation will be readily available if the right approach is made. The age-long stigma attached to leprosy, and the wrong notion of its incurability, are slowly but steadily decreasing, and with this persistent and concentrated attempt made by the Government of Thailand assisted by WHO and UNICEF to bring relief as near to the homes of the patients as possible, a practical leprosy control program in rural areas is by no means impracticable.

#### RESUMEN

La campaña antileprosa de Tailandia, comenzada en Noviembre de 1955 por la Organización Mundial de la Salud, se está desarrollando, con gran eficacia, sobre nuevos conceptos y métodos de sanidad pública aplicada en campañas rápidas de masa en países con altas cifras de endemia, con la pretensión de desterrar el viejo y lentísimo sistema del aislamiento del enfermo de lepra en la leprosería.

La estrategia de campaña de la O.M.S. consiste en llevar a cabo ataques concentrados de registro de enfermos y tratamiento de masa en áreas endémicas y de extensión limitada, por medio de personal nativo y laico pero especializado—por el personal técnico de la O.M.S.—operando en movimiento lento y combinado a través de centros estratégicos semimóviles y unidades-equipo móviles.

Estas unidades motorizadas—las semimóviles en bicicleta o carro de bueyes y las móviles en "jeep"—llevan a cabo una primera fase de búsqueda y registro del enfermo pueblo a pueblo y casa a casa en una zona de operaciones de 20 practicantes de lepra por 250 km<sup>2</sup> y por 650,000 habitantes (proporción del área experimental de Khon Kaen). Los casos registrados son aislados y tratados a domicilio mientras los convivientes son sometidos periódicamente a reconocimiento médico.

El proyecto experimental contra la lepra de Khon Kaen, ya terminado, ha dado resultados muy satisfactorios y concluyentes en esta nueva experiencia sanitaria de la O.M.S., eco de la campaña de masa francesa de Laviron en posesiones africanas. La "reconnaissance" epidemiológica ha arrojado una estadística de 6.750 casos en la extensa

provincia de Khon Kaen (31,5% lepromatosos y 68,5% no-lepromatosos) con un índice hiperendémico de prevalencia de 1 por 100.

Durante cuatro años permanecerán las unidades especializadas en cada zona limitada de operaciones con el fin de completar dicho tratamiento de masa a domicilio amén de vigilar los convivientes contactos y registrar los nuevos brotes de incidencia anual de la endemia.

Al cabo de dichos cuatro años de ataque concentrado y especializado, los servicios contra la lepra, reducidos a un mínimo, serán integrados en los servicios generales de sanidad pública del país en cada provincia y a través de sus centros rurales.

La expansión de la campaña nacional de masa—actualmente desarrollándose en el foco hiperendémico del Noreste de Tailandia—ha comenzado en Enero de 1958 sobre la misma base, fases de operaciones y métodos empleados con éxito en Khon Kaen. La campaña cubrirá, paso a paso y en progresión, todas las zonas endémicas del país en un período de diez años.

#### REFERENCE

1. WORLD HEALTH ORGANIZATION. Expert Committee on Leprosy; First Report. World Hlth. Org. Tech. Ser. No. 71, 1953, 28 pp.