In 1950, Prime Minister Abdul Halim's cabinet identified malaria, tuberculosis, yaws, and leprosy as the 'Big Four' endemic diseases [Penjakit Rakijat] that eradicated the overall vitality of the country's population. Unlike leprosy, yaws is a disease that has escaped public consciousness worldwide. Although not fatal, the disease was the leading cause of disability in Indonesia during the 1950s. Indonesia's anti-yaws campaign, launched in 1950, was the world's most comprehensive attempt to combat this disease at the time. Yet to date, victory against yaws has remained elusive.

Viviek Neelakantan

The campaign against yaws in postcolonial Indonesia

In search of a magic bullet

The Treponematoses Control Project (TCP) was designed to fit into Indonesia's decentralised health services of the 1950s. The focal point of the anti-yaws campaign was the subdistrict (kecamatan), latent yaws cases, and the distances covered by TCP personnel were huge, yet surveillance became difficult and Total Mass Treatment of the disease was the leading cause of disability in Indonesia during the 1950s. Indonesia's anti-yaws campaign, launched in 1950, was the world's most comprehensive attempt to combat this disease at the time. Yet to date, victory against yaws has remained elusive.
paramedical personnel, djurupateks were utilised not only to diagnose yaws, but also to administer penicillin injections. Yaws eradication in Indonesia during the 1950s was internationally well-recognised. Soetopo was nominated as a member of the WHO Expert Committee on Venerable Diseases and Treponematoses in 1953, which was constituted by WHO to study the worldwide prevalence of yaws and venerable diseases, and to design suitable epidemiological interventions for affected countries. But, it was Kodijat who would become a national hero in Indonesia’s campaign against yaws. He had the reputation of being soft-spoken, yet iron-willed. UNICEF had to convince him of the therapeutic efficacy of penicillin against yaws. Only after he had tested penicillin at his hospital in Yogyakarta, and had carefully analysed its effects, did he agree to accept penicillin in treating yaws patients. His painstaking experiments with penicillin utilised in the TCPS, and his immaculately-kept field data and survey maps, were a model for international epidemiologists. For his exemplary community leadership in organising the TCPS in Java, Kodijat was awarded the Ramon Magsaysay Prize in 1961.

The integration of leprosy control activities into the overall activities of the TCPS was successful in reducing the cost of TCPS activities fourfold.

Relevance of the campaign

By the early 1960s, yaws had been banished to the status of a neglected tropical disease, few people were aware of its existence. The global anti-yaws campaigns of the 1950s and 1960s had diminished yaws to infinitesimal levels such that the campaign became a victim of its own success. Before long, eradication efforts were neglected in several countries, including Indonesia. Today, the disease retakes a foothold in Papua New Guinea, Indonesia, Timor Leste, Solomon Islands, Ghana, Togo, Benin, Congo, and Central African Republic. But, there is room for guarded optimism vis-a-vis eradicating yaws globally by 2020, as only humans (and no other animals) are the reservoir of the disease. Following the development in 2012 of an available generic version of the drug have yet again postponed complete yaws eradication.

 disadvantages of penicillin injections: it avoids the need for injection equipment and medically-trained personnel who could be scarce in countries like Indonesia with an overstretched public health infrastructure; it prevents the injection-related risks and side-effects; and, it can be safely administered to individuals with a penicillin allergy. Unfortunately, funding for the procurement of a generic version of the antibiotic is a serious problem for several countries; in addition, WHO has also expressed concerns that the bacterium causing yaws may turn resistant to azithromycin.

The Indonesian Ministry of Health’s current strategy, implemented since 2011: active case finding and treatment, mobilisation of community leaders and religious leaders to promote it, and provision of the Wonder drug like penicillin was not in itself the sole decisive factor in eradicating the disease. Other preventative health measures such as ensuring basic sanitation and hygiene, which were lacking in the rural areas, were also crucial.

The central government officially devolved the financing of the TCPS to the provinces and local governments. While the Indonesian government pledged one-third of the expected penicillin demand, the Indonesian Ministry of Finance did not cooperate with the Ministry of Health in funding the TCPS paramedical and medical personnel. The local governments and provincial governments were unable to fund the full cost of implementing the anti-yaws campaign. The Indonesian Ministry of Health and international agencies, UNICEF in particular, had to break with administrative protocols in order to facilitate the appointment of doctors and djurupateks. But, due to the political uncertainties in Indonesia during the transition from the Soekarno to the Soeharto era (1965-1977), UNICEF suspended financial assistance to the TCPS, and the detection and treatment of yaws patients was consequently put on hold. By 1969, although the overall prevalence of yaws in Indonesia had been reduced to 0.44%, there were sharp discrepancies across the country’s various provinces. Where the provinces of Java recorded an overall prevalence rate of 0.22%, in the Outer Islands provinces, particularly West Irian, nearly 18% of the population was infected. The unsettled conditions during the 1960s, arising from the political differences between Java and the Outer Islands, impeded effective implementation of the TCPS in the latter.

Below: Yaws is a highly contagious disease and may eradicate its victims for life. One single injection of repository penicillin will achieve cure. ‘Juvenile Mass Treatment Using Penicillin’ (1957).

Source: Blader 178, File 37335 (WHO Image Archives).

Kader Kodijat (1890-1968), Architect of Indonesia’s Anti-Yaws Campaign. Courtesy: Ramon Magsaysay Foundation. (The image is in the Public Domain).

 Forgotten disease, incomplete victories

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Reference