The United Republic of Tanzania in 1977 established a National Tuberculosis and Leprosy Programme (NTLP), which is probably the first combined leprosy/TB programme of its kind in the world. The programme has operated successfully during the last 16 years in controlling these two chronic infectious diseases which are of major public health importance. What is the secret of its success?

Despite its poor resources Tanzania has had political stability over many years, and also has a well-established health infrastructure from central to district levels and down to local dispensaries. The NTLP is fully integrated in this existing health system; no extra structures had to be created.

From the beginning, the programme has had the full commitment and support of the government. Almost all staff are Tanzanian, their salaries being paid by the government. A continuous, uninterrupted drug supply from overseas donors has guaranteed that patients looking for treatment do really get it. In addition, reliable transport (cars and motorbikes), which is one of the biggest cost factors besides drugs, has been made available by the donors. Regular training, refresher courses and systematic supervision from the beginning has helped to motivate all levels of staff, and to make the programme a success.

As such, it has served as a model for many other countries. The uniform recording and reporting system designed by the International Union against Tuberculosis and Lung Diseases (IUATLD), under the guidance of Dr K. Styblo, is used nowadays – with only slight variations – in many national TB programmes.
and represents WHO’s recommended recording and reporting system. Moreover, the NTPL has been the platform for the IUATLD’s international course on tuberculosis since 1990.

Why are cases increasing?
The two pillars of the NTLP are case-finding and treatment. Ideally and in theory a programme should:
- find all TB cases;
- treat all of them until cured and thus eliminate a source of infection to others;
- monitor the results achieved in each district to maintain high rates of cure.

Infectious cases are considered to be those patients with TB of the lung, who cough up many tubercle bacilli which can be seen if the sputum is examined by microscopy. These patients are termed smear-positive pulmonary TB cases.

Our estimate for Tanzania is that:
- 80% of all TB patients have been found;
- 90% of them have been treated;
- 80% of the infectious cases have been cured.

These results should normally lead, after some years of proper management, to a steady drop in the risk of infection and to fewer new TB cases. Instead we find a rapidly increasing number of new TB cases. Reported TB cases in 1991 numbered 25,210; in 1992 they were estimated at 27,000, and in 1995 there will be an estimated 36,000. Why is this so?

Preliminary results of a still continuing WHO study in Tanzania reveal a close association of HIV infection and TB. About 30-40% of our TB patients are HIV-positive. When their immune system becomes depressed, they are much more likely to develop active tuberculosis.

Heavier case-load
Although the response to chemotherapy in TB patients who are HIV-positive is generally good, the TB part of our programme is confronted with an increasing case-load year by year. The number of TB cases found in Tanzania more than doubled between 1983 — when the first AIDS case was detected — and 1991, when a total of 25,210 TB cases were notified.

In the first years of the programme (1977-83) it was the quality of the service offered that attracted more and more patients and led to increased case-finding. This is still true to some degree, but at present up to 30% of the TB cases notified in Tanzania are related to endemic HIV infection. The latter is the most important risk factor so far identified to turn latent TB infection into active tuberculosis. Some 40-50% of all Tanzanians aged around 40 years are infected with the tubercle bacillus, but only a few actually develop the disease. When such TB-infected — not TB-diseased — people acquire HIV infection, the tuberculosis quickly emerges and they become very ill.

Tuberculosis is one of the early opportunistic infections in HIV patients, a so-called “marker” disease. It is the only opportunistic infection in HIV patients which can be transmitted to a healthy population. It is therefore in everyone’s interest to control TB.

What can we do to overcome the problem of rising figures for TB? The most important step is to cure as many smear-positive patients (the source of infection) as possible by early, adequate and regular treatment. This also prevents development of resistant TB germs to the few drugs available for treatment of TB.

For many years in Tanzania, around 80% of all patients who had short-course chemotherapy were able to be cured. Last year, of the 8% of patients who died during treatment, many died from causes other than TB; a good number of them died from...
AIDS after being successfully treated for TB. However, a good TB programme would be unable to influence this proportion.

**Cost-effective strategy**

Good programme results (80% of infectious patients cured) can only be maintained by adjusting the numbers of staff with the increase of TB patients, making enough space available for patients in treatment facilities, guaranteeing funds for drugs for all patients (drug costs alone for one patient on short-course chemotherapy are about US$ 30), and finding new ways of managing the numerous cases (such as decentralization of treatment facilities or integration with private institutions); health education is also important.

TB is still the second most important killer in Dar es Salaam, the largest city, which in 1992 harboured 6000 TB cases out of a total of 27 000 for the whole country. It ranks among the top five diseases in the 20 regions of Tanzania and therefore has a very high priority in the country’s health services as well as in primary health care activities. The average costs per patient cured, including drugs, staff salaries, transport, and use of hospitals and other treatment facilities, are around US$ 200. Treatment of TB is a very cost-effective health intervention.

Although TB occurs in children, it is very rarely infectious and can easily be cured if treatment is given. The largest proportion of lives saved are among the adult population, since TB affects mostly adults in Tanzania as it does elsewhere in the world. Early diagnosis and effective treatment will not only enable men and women to do their jobs again, and mothers to bring up their children – often in extended families – but also contribute to a more stable social structure even in the face of the AIDS epidemic.

There is no doubt that endemic TB will continue in Tanzania, because of the unfortunate link with the HIV epidemic. This is a real challenge to all aspects of the programme, and will call for a large input in operational research in order to find strategies to cope with the new situation. Still, TB can be controlled even now:

- if we continue to keep – maybe in a modified manner – the already established services for diagnosis and treatment with a high level of quality;
- if people still trust the programme and come forward for treatment;
- if the commitment of the Tanzanian government and of the overseas donors (International Union against Tuberculosis and Lung Diseases, the Swiss government, the German Leprosy Relief Association, the Netherlands TB and Leprosy Relief Associations, and WHO) continues to be firm.

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A woman receives streptomycin as part of her treatment.