LEPRA RESEARCH


Editor,

In 1957, the Ministry of Public Health of the Peoples’ Republic of China launched a national leprosy control programme, using a vertical (specialized) approach, with emphasis on intensive case finding and prolonged dapsone monotherapy until clinical and bacteriological cure (clinical findings, histopathology and skin smear examination). Short-term multidrug therapy (MDT), as recommended by the World Health Organization (WHO) started in pilot areas from the three South-West Provinces between 1983 and 1985 and gradually expanded to the whole country from 1986 onwards. In fact, China had already reached the WHO definition of elimination (less than one case in 10,000 of the population) in 1981 and at provincial/regional levels in 1992. However, the national criteria for the elimination of leprosy in China announced in 1982, of a prevalence rate of <1/100,000/county, had not been achieved by 1999 in 251 counties (9%), of which 166 counties originate from south-western parts of the country.1,2

After 45 years of leprosy control activities, prevalence and detection rates have come down markedly in the more developed coastal provinces, but it has become increasingly evident that the vertical approach established many years ago can no longer serve the purpose of elimination in the difficult mountainous provinces of south-west China.

We describe here a project carried out in selected townships of Wenshan Prefecture in the Province of Yunnan 1998–1999 in order to a) accelerate the elimination process, b) maintain vigilance for newly arising cases and c) assess the potential of primary health care (PHC) workers in the context of integration.3

Wenshan Zhuang and Miao Autonomous Prefecture, bordering with Vietnam, consists of eight counties and covers 3659 km² of difficult mountainous terrain with 3,285,358 population of 17 ethnic groups. Leprosy control has been based on a vertical approach since 1975, with technical guidance from the Provincial and Prefecture Institute of Dermatology (IOD). There are eight County Skin Disease Control Stations (SDCS), each with about 10–12 leprosy workers (LW). Dapsone monotherapy was introduced in 1958, domiciliary treatment with rifampin plus dapsone in 1979 and fixed duration MDT in 1986. Since the implementation of MDT, the prevalence of leprosy has fallen from 4.9 to 1.4/10,000 between 1985–1999, while the detection rate remains at 4.2–5.3/100,000, with high MB (43.8–53.6%) and deformity (31.5–18.1%) rates and a fluctuating child rate (2.1–18.5%). The prefecture of Wenshan is lagging behind China as a whole in leprosy control (Figure 1).4

The Leprosy Department of Wenshan IOD has five experienced leprosy workers plus a director. A Health Systems Research (HSR) study in Wenshan County (1994–1996) indicated that the primary health workers interviewed believed that additional work in leprosy control would not greatly increase their workload, but they felt that they lacked knowledge of the early signs of leprosy and principles of leprosy control.3

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The three-tiered PHC system is under the administration of the County Bureau of Health (BOH), with a network of 10–15 Township Health Centres (THC), each with two midwives (MW) and two public health workers (PHW) plus approximately 300 village clinics (VC) and one to two primary health workers (VHW) each.

Particularly in view of the landlocked, difficult, mountainous terrain of Wenshan and its known high prevalence and serious under-detection, the essentials of Leprosy Elimination Campaigns (LEC) and Special Action Programmes for the Elimination of Leprosy (SAPLE), as recommended by WHO, were adopted.5–7

A team of leprosy workers from the Prefecture IOD and County SDCS developed a programme of health education to stimulate community participation through health education in different ethnic languages, whilst at the same time to training a network of PHW and voluntary health workers in elementary knowledge of leprosy control, disability prevention and supervision in general. In all these activities there was strong political support from the Prefecture BOH and, due to the responsibility bestowed on the different levels of the civil and health administration, the term ‘Government Action’ was adopted. Our approach and procedures were very similar to those already described by WHO and in a special edition of this journal.8 Pictures of the early signs of leprosy, posters on why, where and how to treat were widely displayed in public gathering places, schools and offices in county towns, townships and villages. Repeated radio and TV talks on the importance and purpose of leprosy control by the director of Prefecture BOH and the respective county mayors, plus public speeches by township and village headmen, were given a few days ahead and during the entire operation. The village headman was designated as team leader. He and volunteers from the respective villages guided LWs to make home visits and solving any problems that arose. Health education in local languages was more intensive on market days with free medical consultation and treatment for minor ailments. Special health education and surveys were conducted in schools for early detection.

Figure 1. Prevalence rates in Wenshan Prefecture and in China, 1950–2000.
Results

The main results of this project were as follows:

1. Through mobilizing the PHW, as indicated in the HSR study in Wenshan County, the MDT service was brought much closer to the village people, because the area coverage for case detection was reduced from 400 km²/LW to about 9 km²/VHW and the population coverage from 39,290/LW to 1,007/VHW from the prefectural to the village level, respectively.3
2. In 1996, detection costs on average US $36 per case in vertical control, whereas in the integrated study the expenditure was US $17 per case, reducing the cost per patient detected by more than half.
3. With the initial success of HSR in Wenshan County,3 SAPEL in Menghai County of Xishuangbanna Prefecture,9 in Yanshan and Qiubei Counties in Wenshan Prefecture,6 activities expanded in 1988 to an additional five townships in four counties of Wenshan Prefecture, thus causing a peak in detection rate in 1998. The number of new patients detected increased ×4.8 (116 versus 24-4) during the 2 weeks operation of SAPEL/LEC as compared to the previous 5 years (1993–1997) annual average. Indicators for early detection have also increased: the child rate ×2.8 (40 versus 15); duration of illness <1 year ×1.3 (66 versus 55); single lesion cases ×5.1 (53 versus 11) and paucibacillary leprosy ×2 (93 versus 49). There was also a decrease in patients with deformity ×2.3 (12 versus 28). Confirmation of diagnosis of suspected early lesions was supplemented by immunohistopathology with PGL-1 monoclonal antibody and rabbit anti-S-100 protein.10
4. With regard to the attitude and performance of PHC staff, this was rated as satisfactory throughout. There was no evidence of a significant change in the rate of over- or wrong diagnosis as a result of their involvement in detection and referral of cases, compared to the previous performance of vertical/specialized personnel.
5. Community participation and attitudes could not be assessed in detail, but it was obvious that the health education programme generated considerable public interest and there was no instance of lack of failure to co-operate with health personnel on house visits or clinic attendances.

Discussion

The striking increase in the number of new cases detected during only 2 weeks of this project, as compared to the numbers detected annually in the previous 5 years, is entirely in keeping with findings in numerous other SAPEL-LEC type activities already reported in the literature.7,8 Although perhaps partly due to the under-development of the routine leprosy control services in the areas described in this study, we have no convincing explanation, other than to comment that a high percentage of the patients diagnosed may well have been totally unaware of the likely diagnosis or were residents in villages not covered in the vertical programme. It remains to be seen whether or not there is a case for maintaining some level of health education on early presentation, so that the improved rate of case detection is sustained. Of even greater importance is the matter of ensuring satisfactory importance by PHC workers in an integrated programme. Their involvement at this stage is in fact not merely an option, but rather an urgent necessity. Their successful involvement will call for a high level of supervision by experienced staff on a long-term basis.

The aim of integrated leprosy control is early diagnosis, prompt, free delivery of MDT and 100% area coverage. We need to be fast, for the prevention of disability; we need to be thorough to bring the benefit of treatment to every village, not only to achieve elimination as soon as possible, but also for the final eradication of this scourge from mankind. This will lead us well into the twenty-first century. This goal requires smooth, unrelenting, co-ordinated effort in health education, training of LWs and PHWs, together with the participation of dermatologists and periodical revision of prefectural,
provincial and national progress, solving problems when and where they arise, and with a sense of urgency.

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References


2 Institute of Dermatology, Chinese Academy of Medical Sciences, Nanjing, unpublished data, 2001.


