



REPORT OF THE CONSULTATION ON LEPROSY CONTROL
 WITHIN URBAN PRIMARY HEALTH CARE

Alexandria, 14-17 November 1988

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1. INTRODUCTION

The consultation was held at the WHO Regional Office for the Eastern Mediterranean, Alexandria, from 14-17 November 1988 and was attended by 17 participants from 14 countries, a representative of the German Leprosy Relief Association as well as WHO staff (see Annex 1).

The meeting was opened by Dr A. Khogali, Director of Programme Management, WHO Office for the Eastern Mediterranean. In his opening remarks, Dr Khogali stated that nearly one-third of the world's population, that is more than 1.5 billion people, live in leprosy-endemic areas. A conservative estimate of the number of leprosy cases in the world is about eleven million; one third of these is under the threat of permanent, progressive disability which is unfortunately associated, in most places, with social rejection. This is the main reason why leprosy is one of the most serious health problems in endemic countries, although its morbidity rates are not comparatively very high. He mentioned that by the year 2000, 3.2 billion people, representing more than half of the world's population, will be living in cities, especially very large cities. Approximately half of these, or a quarter of mankind, will be living in these urban areas in conditions of deprivation that will succumb, in many cases, to misery.

With regard to leprosy, he said that with increased urbanization and rural-urban migration, it seems that large numbers of leprosy cases will be among the urban poor. Case-finding, case-holding and effective chemotherapy for these leprosy patients will be one of the major duties of primary health care units in urban areas.

Dr S.K. Noordeen, Chief Medical Officer, Leprosy Unit, WHO headquarters, said that the reason for this consultation was to enable experts with worldwide experience in urban areas to discuss the problem of urban leprosy in detail and suggest appropriate methods and strategies, specific to urban situations, for case-finding, case-holding, health education and rehabilitation. The objectives of the meeting were:

1. To discuss, and possibly estimate, the magnitude of the leprosy problem in urban areas and the role played by the rural-urban migration.
2. To develop strategies for leprosy control specific to urban situations.
3. To identify coordinating mechanisms for the optimal utilization of resources to achieve leprosy control in urban areas.

2. PROGRAMME REPORTS

2.1 Dr Kosasih made his presentation on the leprosy programme in Jakarta, the capital city of Indonesia. This city has a population of about seven million, a density of 11 000 persons/km² and a land area of approximately 660 km². The population stems from all over the country, with heterogenous characteristics in terms of social, economic, cultural and health behaviours. Besides the permanent settlers, there are the temporary dwellers who constantly come and go according to season and the homeless among whom leprosy patients are often found. The metropolitan city of Jakarta is administratively divided into five districts, 30 subdistricts and 260 villages.

The city health service is headed by a director from the Jakarta Provincial Office of Health, while each district has a district office of health and each subdistrict has a community health centre (CHC). Almost all villages have a CHC which is under the supervision of the subdistrict CHC. There are also mobile CHCs which cover certain isolated areas; these are coordinated by the subdistrict or village CHCs. The CHC/population ratio is 1 to 26 000 population.

Ten of the 267 village CHCs and 26 of the subdistrict CHCs provide referral services for leprosy patients.

The significant increase in the budget allocation for leprosy during the last two years has been used for; (1) purchase of medicines and laboratory equipment; (2) upgrading of medical doctors, paramedics and laboratory technicians, transport costs of visits to schools and to homes and supervision costs.

There is a medical doctor and a paramedical responsible for leprosy in the CHCs where this service is provided.

The personnel of the leprosy service joins the school health service during medical examinations of children.

In Jakarta, there are 20 state, 23 private and 7 military hospitals of which 9, 11 and 6 respectively provide services for leprosy patients.

2.2 The leprosy control programme in Madras was presented by Dr D. Lobo. Madras is the fourth largest city in India with an area of 174 km² and a population (1981 census) of 4.25 million. There are 395 slums housing 30% of the city's population.

Dr Lobo described the health, educational, public transport, media and service clubs facilities, as summarized in the following tables and concluded that, with such a large network of facilities, there was tremendous scope for (a) integration; (b) mass awareness and education programmes and (c) voluntary presentation of cases.

Table 1. Health promotion, care and treatment centres

<u>Institution</u>	<u>No.</u>
Medical colleges	3
Government hospitals	8
Corporation dispensaries	69
Child welfare centres	44
Family welfare centres	32
Communicable diseases hospitals	3
Private hospitals and nursing homes	134
Private medical practitioners	1 500*

* Includes only allopathic doctors

Table 2. Educational institutions

I. Corporation of Madras

(a) Primary/elementary schools	369
(b) High schools	25
(c) Higher secondary schools	10
(d) Chief minister's non-meal centres	365 (116 710 children)

II. Private schools

(a) Primary/elementary schools	380
(b) High schools	110
(c) Higher secondary schools	29

III. Colleges

(a) Arts/sciences/commerce	28
(b) Social work	3
(c) Nursing	3
(d) Dental/veterinary	2

Table 3. Public transport

(a) Road	2 200 buses
(b) Railway	484 coaches
(c) Suburban railway stations	27

Table 4. Media

(a) Television centre	1
(b) All India Radio	1
(c) Cinema/theatres	95
(d) Daily newspapers: English	3
Tamil	7

Table 5. Service Clubs

<u>Club</u>	<u>Number</u>	<u>Membership (approx)</u>
(a) Lions	80	6 000
(b) Rotary	16	1 200
(c) Jaycees	6	250
(d) Round-table	6	200

The population of Madras, said Dr Lobo, was covered by four leprosy control units: (a) GREMALTES Referral Hospital and Leprosy Centre (GLRA) covering a population of 2.7 million; (b) Government Leprosy Control Unit - Saidapet, 774 300 population; (c) Urban Leprosy Control Unit Saidapet, 122 100 population, and (d) medical colleges with a 293 200 population coverage.

The total number of cases detected by GREMALTES between 1972 and 1987 was 33 620 and their distribution by detection methods was as follows:

- Intensive survey	8 714 (25.92%)
- School survey	9 012 (26.81%)
- Contact survey	2 942 (8.75%)
- Voluntary reporting	12 952 (38.52%)

Dr Lobo commented that while every attempt must be made to increase the proportion of voluntary reporting cases, routine methods of active case detection such as those in schools, slums and contact surveys should not be ignored. Dr Lobo said that although integration of leprosy control into the general urban health services was the "ideal" situation, it must be realized that to have an effective control a technical (vertical) component was required in urban areas. The size or strength of this component would vary from city-to-city and from situation-to-situation. Dr Lobo favoured the existence of an urban leprosy control team which, in coordination with other agencies, would develop an overall strategy, plan of action and implementation of the programme. Leprosy control in urban areas should include: (1) reconstructive surgery; (2) teaching of leprosy at undergraduate and postgraduate levels; (3) early detection and proper management of nerve involvement, and (4) prevention of nerve damage.

2.3 Dr Chaudhury's presentation was on Calcutta. Today, the Calcutta Metropolitan District covers approximately 550 square miles (1425 km²) with a population of a little over 10 million. The municipal corporation limits of Calcutta, which forms the core, covers 40 square miles (104 km²) and houses about 4 million people. Calcutta Metropolitan District today consists of Calcutta Corporation, 35 other municipalities, 61 non-municipal urban areas and 500 semi-urban villages.

Two interesting things are happening Dr Chaudhury said. As more and more people arrive from the rural hinterland of West Bengal as well as from the adjoining states, congested locations of shanty towns are becoming more and more crowded. On the other hand, there is a growing expansion of the "suburban phenomena". A number of townships or settlement colonies are springing up where little or no civic or "sanitary" attention has been planned.

Calcutta remains the economic centre for the whole of Eastern India. It serves as the main location for business institutions, educational and medical facilities and it is still the principal port for import and export. Hence, it attracts a large labour force and migrants come in search of employment. Many sick people, especially leprosy patients, come believing that medical treatment is more easily available, while others take to begging to maintain their anonymity.

The density of the population, which is high, has risen to 200 000 persons per square mile in some of the slums of Calcutta. Slums exist in almost all of the 141 corporation wards of Calcutta. Forty-eight percent of the city's population are adult males in the 20 to 50 years age group. On the occupational side, there are 2.5 million male and 1.5 million female workers in the metropolitan district. A large number of these people retain strong links with their origins and return to their home provinces or districts for several months every year when more hands are needed on the land or relatives gather for festivals. This adversely affects the smooth continuity of health programmes and interrupts delivery of treatment.

It is against this backdrop that we view the magnitude of the leprosy problem in Calcutta and the appropriate steps needed to tackle it. The active case detection rate per thousand among the slum dwellers is 7.8. On examining schoolchildren in the slums a case detection of 7 per thousand was obtained and, as one would expect, almost all of them were very early cases of leprosy. There is clustering of leprosy in sweepers' colonies and shanty towns. The estimated number of leprosy patients in the Calcutta municipal area is close to 40 000, but this figure would be much more if the entire metropolitan district was taken into consideration. In 50 000 pavement dwellers the occurrence of leprosy is quite high. Approximately 3% suffer from advanced leprosy; many are deformed and quite a few are active and/or infectious cases.

The three essentials of urban leprosy control activities are: (1) case-detection through examination of slum dwellers and schoolchildren, as well as examination of contacts of known cases; (2) efficient outpatient treatment in convenient health centres and in all treatment institutions ranging from a small community health post to a large teaching hospital; and (3) facilities for short-term hospitalization and correction of deformities with appropriate follow-up. This can only be achieved when the leprosy control programme is integrated into and interrelated with basic health services, and leprosy patients are cared for by primary, secondary and tertiary level health institutions.

Dr Chaudhury said that all health agencies - municipal, government or voluntary - should be involved in leprosy control work. The agencies solely engaged in leprosy control work should operate in a close functional interrelationship within an overall time-bound master plan. Anti-leprosy organizations should seek the active and continuous cooperation of primary health care staff, municipal or otherwise, especially for health education, case-holding and for defaulter retrieval.

The mechanism for the optimal utilization of resources to achieve leprosy control in urban areas of Calcutta will be to form a Coordination Committee with representatives from health services, municipal services, and the media; leaders capable of influencing public opinion, including teachers and lawyers; and representatives of those agencies which are involved in both health and development activities in the metropolitan district. This Committee should meet and draw up action plans to determine priorities.

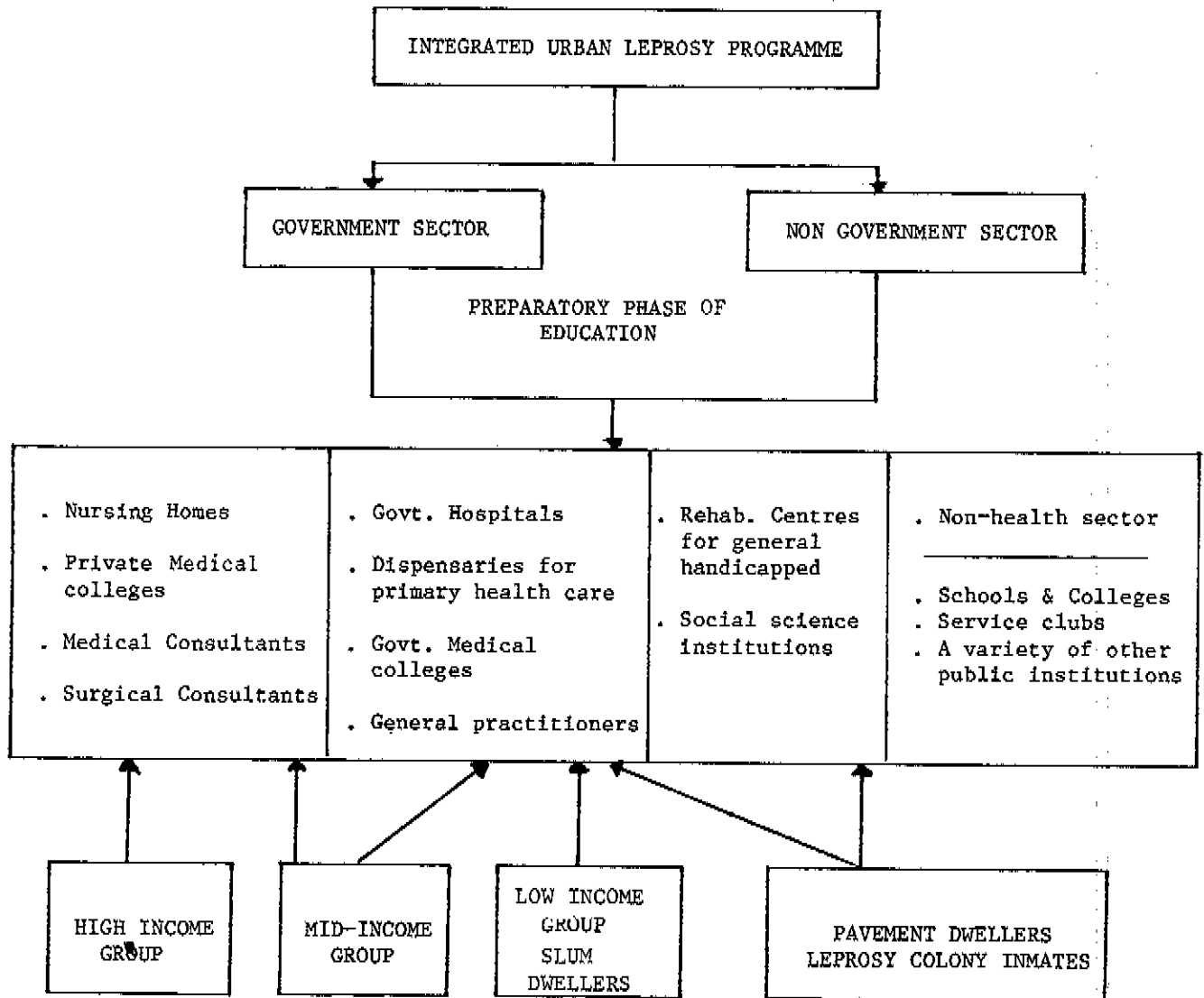
2.4 While presenting the Bombay Leprosy Project, Dr Ganapati stated that the traditional way of dealing with the disease in the city, namely the distribution of dapsons tablets from the old leprosy hospital in the centre of the city, was unsuitable and could not cope with (almost) all facets of the disease, i.e., case-detection, case-holding, physiotherapy, surgery, rehabilitation, social work and research etc. Moreover, the very fact that these services, although rudimentary, were only available in the leprosy hospital increased the stigma that already existed in the various strata of society, including that of the medical elite. The only solution to this state of affairs was to start a rational field-based programme at the grass roots level, not only to trace and treat the patients but to educate the public. This, however, posed several challenges, the most important of which was the financial implications.

Dr Ganapati also mentioned that some groups tried to minimize the seriousness of transmission of leprosy in areas of high population density. The work of the Bombay Leprosy Project has proved the seriousness by revealing a mean prevalence rate of 12 per 1 000 in slums and the existence of pockets of high reservoirs of infection in leprosy colonies.

After running the leprosy project routinely for a few years, Dr Ganapati said that the need for an integrated programme with non-leprosy structures available in urban communities was clearly recognized. This would help to eliminate the stigma as well as to reduce the cost of anti-leprosy operations. In this respect, leprosy managers should make effective use of:

- (1) general hospital facilities for surgical procedures, physiotherapy, ulcer dressing, etc; and
- (2) general rehabilitation centres for employment of leprosy patients along with other physically handicapped subjects.

On the basis of the experiences gained by the Bombay Leprosy Project, he suggested the following scheme for the implementation of an integrated leprosy programme in urban areas.



LEPROSY HOSPITALS TO
FUNCTION EXCLUSIVELY

FOR

- RESEARCH
- TRAINING
- TREATMENT OF COMPLICATIONS
- AS REFERRAL CENTRES (IF NECESSARY)

2.5 Dr de Mesa Reyes made her presentation on leprosy control in Manila.

In 1987, the National Leprosy Control Programme introduced multidrug therapy (MDT) in the National Capital Region (NCR). This new programme was implemented to a very limited extent by the Dermatological Research and Training Services (DRTS) under the overall supervision of one of the tertiary hospitals in the NCR. As such, only passive case-finding was conducted and there were no provisions for following-up defaulters. This responsibility was left in the hands of a non-government agency with a very limited number of personnel to accomplish the actual task. Hence, the compliance rate was only 30%. Multidrug therapy implementation in the NCR closely follows the guidelines set by WHO. Drugs are blister-packed for the patients' convenience. Surveillance is carried out every one to three years for paucibacillary cases and every five years for multibacillary cases.

Prior to the complete transfer of the programme to the health services, training for all health personnel from physicians to sanitary inspectors was carried out. At present, training is held for the health workers in the four cities of NCR only.

The NCR total population in 1987 was 7.4 million with an average population density of 11 563 per sq km. The total number of registered cases for the same year was 5 298 giving a prevalence of 0.7 cases per 1 000 population. In 1987, there were 350 cases already on MDT, 927 new patients and 229 cases who had completed MDT.

A Strengths, Weakness, Opportunities and Threats (SWOTS) analysis has been conducted but it was decided to await the recommendations of the WHO Consultation on Urban Leprosy before taking further action.

2.6 Dr Charoon from Thailand made his presentation on Bangkok. Leprosy control in Metropolitan Bangkok began in 1960 with the establishment of a skin clinic and the provision of specialized services for leprosy patients and patients with dermatological problems. Mobile services such as active case-finding and domiciliary treatment were also conducted annually in certain areas of Bangkok and neighbouring provinces in collaboration with municipal centres of the Ministry of the Interior.

In 1970, according to the National Health Development Plan, leprosy control in the Bangkok metropolitan area was integrated into the general health services and became the responsibility of the municipal health centres under the technical supervision of Zonal Leprosy Centre I. Prior to integration and with financial support from the Hartdegan Foundation, orientation training in leprosy control was organized for the medical officers and health staff of the sixteen municipal health centres. With a view to standardizing knowledge and concepts of leprosy control as well as to introduce the multidrug therapy regimen, a three-day refresher course was organized in 1986 for all medical officers and nurses of 50 municipal health centres in Bangkok.

At present, apart from two skin clinics at Zonal Leprosy Centre I and 59 municipal health centres, there are seven hospitals and one dermatological clinic that also provide medical care to leprosy patients in Bangkok. However, the main services available to leprosy patients are provided by the two skin clinics. In addition, leprosy control services in municipal areas of other provinces are mainly performed by the staff of CDC section of the provincial health offices. The roles and functions of primary health care workers in Bangkok and other municipal areas have not been accomplished as well as expected.

Dr Charoon gave the following leprosy statistics for Metropolitan Bangkok.

- Total registered cases: 1 716 (give rise to P.R. 0.31/1000)
- Paucibacillary cases: 427 (24.9%) and multibacillary cases 1 289 (75.1%)
- Proportion of cases treated with MDT: 87.74%
- L-ratio of new cases, 1988: 44.87%

- Proportion of cases that migrated from the provinces (1984-1988): 26.24% (data only from two skin clinics)
- Number of Village Health Volunteers/Village Health Centres (VHV/VHC) in Bangkok metropolitan: 919/3 719 that covered 550 out of 850 villages (64.71%)
- Utilization or involvement of VHV/VHC in Metropolitan Bangkok at present are rabies control; nutritional project; environmental sanitation; drug cooperatives, day-care centre and Basic Minimum Needed (BMN) project respectively.

Dr Charoon gave a summary of the current leprosy control activities in Metropolitan Bangkok as follows:

1. Case-finding and case-holding are mainly undertaken by the two skin clinics.
2. Provision of anti-leprosy drugs, technical supervision, teaching and health educational material are the responsibility of the Leprosy Division and Zonal Centre I.
3. The 59 municipal health centres use the two skin clinics of Zonal Leprosy Centre I as referral centres for diagnostic confirmation and management of medical complications.
4. Motivation and utilization of local manpower resources, e.g., VHV/VHC, elementary and municipal schoolchildren to participate in leprosy control activities, are the responsibility of the Health Bureau and municipal health centres of the Bangkok Metropolis, Ministry of the Interior.
5. Situational analysis and information systems are performed by the Leprosy Division in collaboration with the Health Bureau, Bangkok Metropolis.

Dr Charoon ended his presentation by providing some statistical information concerning health manpower resources and its distribution in Thailand, as well as statistical data concerning health indicators and mortality and morbidity of prevalent diseases in the country.

2.7 The next presentation, which was given by Dr Honey, was on Hong Kong. In 1987, the population of Hong Kong was 5 613 000 and over 90% lived in urban style accommodation. Population density was high in some areas, up to 165 000 persons per square kilometer.

The population in 1950 was 2 237 000 but since then the increase in migration has been considerable with many of the new arrivals coming from rural areas. In 1986, 40.7% of the population was non-Hong Kong born.

In 1987:

(a) Life expectancy at birth was 74 years for males and 80 years for females; (b) Infant mortality per 1 000 live births was 8; (c) Over 96% of the children aged 6-14 years attended school; (d) The adult literacy rate was estimated to be about 85%; (e) The per capita gross domestic product was HK\$64 000 (US\$8 460); (f) The unemployment rate was 1.9%.

Concerning case detection, Dr Honey said that from 1954 to 1987, 1 247 leprosy patients were registered and treated in Hong Kong as follows:-

<u>Year</u>	<u>New cases registered</u>	<u>Per 100 000 population</u>
1954	320	13.5
1959	297	10.0
1964	271	7.7
1969	127	3.3
1974	110	2.8
1979	69	1.4
1984	32	0.6
1987	21	0.4

The last child to be registered in Hong Kong was in 1980.

Hong Kong has a widespread and heavily used primary health care system including Government clinics and private practitioners. The system includes a school health service and a maternal and child health service. 95% of the children receive BCG inoculation.

Persons with suspected leprosy are referred from the primary health services to the dermatology and leprosy service and in recent years nearly all new cases were at an early stage of the disease. Leprosy is notifiable in Hong Kong.

With respect to leprosy treatment, Dr Honey said that in 1977 a form of multidrug therapy with dapsone, clofazimine and rifampicin was introduced (the WHO regimen has been used since 1983). A total of 425 patients were under multidrug therapy from 1977 to 1987 with satisfactory results.

The Hong Kong Hei Ling Chau Leprosarium functioned from 1951 until 1975. From 1975 a small in-patient unit has been functioning and at present it has 11 mainly elderly and disabled patients.

An organized out-patient leprosy treatment programme was started in 1954 as part of the Hong Kong Government's Social Hygiene and Dermatology Service. Leprosy treatment is free and is given mainly from two centralized urban clinics.

Confidential treatment for leprosy patients at the clinic includes multidrug therapy; reaction treatment; simple physiotherapy; ulcer treatment with emphasis on prevention of ulcers; a medical social service; health education with contact tracing, patient tracing, patient surveillance and compliance. Patients have ready access to integrated primary health services for general illnesses and specialized physiotherapy, orthopaedic and plastic surgical and limb fitting services as well as home nursing and home help services. A full X-ray and laboratory service is also available. A teamwork approach with emphasis on rehabilitation is followed.

Dr Honey went on to list a number of case-holding activities which he thought were instrumental to the success of the Hong Kong leprosy programme:

- (a) The main leprosy clinic, centrally located, is convenient for transport and is easily accessible from the street.
- (b) The clinic operating hours include evening treatment sessions for those who work during the day. The contact surveillance clinic is held at a time convenient for schoolchildren.
- (c) Treatment is given without appointments and without long waiting times.
- (d) There is a medical social worker adjacent to the clinic who arranges housing, employment and welfare payments for patients and their families when necessary.
- (e) The welfare benefits available to leprosy patients in Hong Kong are the same as for other diseases.
- (f) An integrated home nursing, ulcer dressing and home and meals helper service is available and is used by leprosy patients.
- (g) A public health nurse and team of assistants give repeated health education and advice to patients and their families and arrange contact tracing and make home visits to improve patients' compliance with treatment and surveillance.
- (h) Some members of the leprosy treatment team are former patients who, from personal experience, understand leprosy very well and who relate to, and are trusted by, the patients.

- (1) Besides leprosy work, the leprosy clinic staff can, and do, transfer to other sections of the medical service. An experienced stable core of staff, however, remain in the leprosy treatment team and represent many years of leprosy treatment and control in all its aspects.

2.8 Dr Tan from Singapore made her presentation. The Republic of Singapore is a tropical island of 622.6 sq.km with a 100% urban population of 2.6 million. Chinese form 76.1% of the population, Malays, 15.1%, Indians, 6.5% and others 2.3%. The population growth rate has been 1.0% over the past three years.

Singapore has 22 hospitals and 47 community health, maternal and child health clinics which are responsible for the health of the population at the primary health care level. The doctor/patient ratio is adequate at 1.889. However, there is a shortage of nurses/midwives.

Dr Tan then reported on the organization of the leprosy services. Leprosy became a notifiable disease in 1951 and a national register was set up. Under the Leprosy Ordinance of 1955, it was mandatory for infectious leprosy cases to be isolated in the leprosarium, Trafalgar Home, which was built in 1926. The Infectious Disease Act, 1976, superseded the Ordinance and since then the tendency is to treat uncomplicated new patients as outpatients.

The outpatient clinic for treating leprosy patients is now housed in the new dermatology centre, called the National Skin Centre (NSC). The cases are referred to the NSC by government community health clinics, hospitals and private practitioners. Patients needing hospital care for the treatment of infectious leprosy and its complications are sent to the Leprosarium, renamed Trafalgar Unit or the Communicable Disease Centre. Management of surgical and acute medical conditions are provided by other general hospitals.

The notification of leprosy cases is centralized together with tuberculosis, sexually transmitted diseases and human immunodeficiency virus infection at the Epidemiological Department, under the purview of the Director of Disease Control. The management of leprosy patients is centralized in the NSC whose doctors also man the leprosarium.

The annual incidence of leprosy has declined over the past six years from 61 in 1982 to 44 in 1987. The majority of cases reported were between the ages of 20 and 50 and above; the age-specific incidence rate increased with age. Since 1970 no new cases have been seen in children under five years of age. The majority of new cases are diagnosed in the dermatological clinics with referrals from outpatient clinics, hospitals and private practitioners forming the remainder. In the epidemiological investigations of leprosy cases, special attention is given to examination of household contacts since this has been found to be a higher pick-up rate than mass screening of the population. Concerning specific treatment, Dr Tan said that since 1976 various drug combinations have been used for smear positive patients so as to prevent secondary dapsone resistance, but since March 1985 new regimens (containing protionamide/ethionamide) based on those recommended by WHO were introduced.

Since the incidence of drug-induced hepatitis in 148 patients who were on these regimens was high (12%), due mainly to the use of thioamides, the use of protionamide/ethionamide has been discontinued for paucibacillary patients. For the last two years, multibacillary leprosy patients who have been on dapsone monotherapy are now being converted to multidrug therapy after which therapy will be discontinued.

Health education is necessary for the implementation of case-finding and case-holding. Leprosy is included in the curriculum of medical students, post-graduate doctors taking courses in internal medicine and public health, nurses and public health inspectors.

Dr Tan concluded by saying that although the incidence of leprosy is declining, the problem is not over as there are still more than 2 000 patients on active treatment. This number will decrease when patients on lifelong monotherapy are converted to multidrug therapy.

A high standard of management of leprosy and the health education of the medical profession should still continue so as to enable the eventual eradication of leprosy.

2.9 Leprosy control in Alexandria was presented by Dr Zariffa. Alexandria, a large seaport, is the second largest city in Egypt with a population of three million. The city stretches 40 km along the Mediterranean coast covering a surface area of 2 679 sq.km. The population density is 1 120/sq.km, the average family size is 4.5 and the average number of persons inhabiting a room is 1.5. Internal migration to Alexandria from rural areas and the high national population growth (2.8%) are important factors in the rapid urban population increase and the formation of urban slums. Literacy in Alexandria seems to be well above the national figures (50.6%) given in the 1986 census.

Medical care in Alexandria is provided by: (1) Government services such as general and specialized hospitals, outpatients treatment centres, etc., (2) University hospitals; (3) Medical Insurance Scheme, covering all regular workers (Government and public sectors), with its own hospitals and clinics and (4) Private hospitals and practitioners.

The leprosy service in Alexandria is part of the National Leprosy Control Service of the Ministry of Health. It comprises the Amriya Leprosarium and seven integrated outpatient centres with dermatology clinics. The Amriya Leprosarium which has no female section, was established in 1946 and is situated 25 km from the city centre on the desert road to Cairo. The number of patients in the Leprosarium has gradually been reduced to 120. New admissions are patients who need hospital care as well as some multibacillary cases. A new ward was established for patients whose hospital expenses are partly covered by the National Medical Insurance Scheme. Treatment of leprosy patients at National level is free. The Leprosarium accepts patients from all over the country. It has no outpatient clinic but receives referred cases from other centres. Medical care in the Leprosarium includes ophthalmic and dental services but no surgery or physiotherapy services are yet available.

The Leprosarium serves an important function in leprosy training as medical and nursing students visit it for clinical training sessions.

Although leprosy control remains a vertical service at the central level, the tendency to integrate with dermatology began at the peripheral level in the 1970s in Alexandria. The Faculty of Medicine concurrently took more interest in leprosy and leprosy patients were, for the first time, admitted to general wards and the study of leprosy was allowed more time in undergraduate and postgraduate teaching. During the 1980s, most dermatology outpatient clinics integrated leprosy into their services.

The total number of leprosy patients under treatment in Alexandria in 1988 was 566, these were diagnosed as 260 paucibacillary cases and 306 multibacillary cases. This points to a low prevalence rate of 0.188 per thousand population.

Dr Zariffa pointed out some of the advantages and disadvantages of integrated versus specialized programmes. Concerning training in leprosy he said that:

- 1) Leprosy is included in undergraduate and postgraduate teaching at the Faculty of Medicine.
- 2) Many medical conferences and clinical meetings include leprosy as a topic, whether organized by the Faculty of Medicine or the Egyptian Association of Dermatologists in Alexandria.
- 3) Training sessions are held at the Leprosarium for medical and nursing students, and,
- 4) In-service training for doctors working in dermatology clinics include regular sessions on leprosy.

Dr Zariffa ended his presentation by referring to the roles played by the Ministries of Health and Social Welfare, and that of the nongovernmental organizations as follows:-

(i) The role of the Ministry of Health

All leprosy units are under the Leprosy Control Department of the Ministry of Health and the Ministry bears the main financial burden of the service. Medical care for leprosy patients is free of charge.

Additional input by international agencies (World Health Organization, German Leprosy Relief Association, Damien Foundation) is regulated by bilateral agreements.

The law of compulsory segregation of leprosy patients is still valid but not applied any more.

(ii) The role of the Ministry of Social Welfare and Social Insurance

Two important legislations are of benefit to the leprosy patients:

- The first legislation allows workers covered by the social insurance scheme to receive their full salary while under medical treatment. Leprosy is considered a curable disease and leprosy patients belonging to this category benefit from this insurance as long as they are under supervised treatment.
- The second, called the Sadat Pension System, covers some categories of people who have no source of income, such as widows, the elderly and incapacitated patients including leprosy patients. They benefit from a modest monthly allowance.

(iii) The role of nongovernmental organizations

They work in close cooperation with the Government service and under the supervision of the Ministry of Social Welfare. They provide social relief to the patients and their families, medical and social rehabilitation and health education of the public within the limits of their facilities.

2.10 Dr Kamel from Cairo referred to the Urban Primary Health Care services. Thirty-one Urban Health Centres were recently established in Cairo so as to offer an integrated health programme. Each centre offers the following services to the target community:

- . Maternal and child health services
- . School health services
- . Communicable diseases control
- . Endemic and parasitic diseases control
- . Environmental sanitation
- . Health education and nutrition education
- . General practitioner and curative care
- . Emergency medical care
- . Health registration
- . Dental care
- . Oral rehydration therapy
- . Family planning

Each centre, which covers a population of 50 000, is staffed by a health team comprising the following members:-

10 Physicians (one physician/5 000 population)	1 Statistical technician
2 Dentists	1 Laboratory technician
2 Pharmacists	2 Assistant laboratory technicians
15 Nurses	1 Social worker
3 Sanitarians	2 Statistical clerks

With regard to the organization of the leprosy services, Dr Kamel mentioned that at the central level (MOH) there is a Directorate of Leprosy Control under the Director-General for Preventive Services. Each province has a special clinic which caters either for both skin diseases and leprosy, or for leprosy alone. The clinics for leprosy and skin diseases are combined in Alexandria, Aswan, Giza, Beheira, Menoufia, Assiut and Sohag. In most of the remaining provinces there are only leprosy clinics.

There are two referral hospitals (leprosaria); one at Abu Zaabal, 50 km from Cairo, which has 150 females and 400 male patients and the other at El Amreya, 25 km from Alexandria, which is only for males and has 150 beds.

If a district has a population of 50 000 or more inhabitants, it is provided with a hospital with approximately 20 beds for general patients. The district hospitals have subclinics for leprosy and dermatology where leprosy patients are diagnosed and treated or referred to the provincial clinics.

At the village level, there are dispensaries which are staffed by PHC doctors and other supporting staff. The role of this level in leprosy control is still to be defined.

2.11 Dr Adeleye from Nigeria started his presentation by saying that the medical care services in Nigeria are provided by the three tiers of Government - the Federal (Central) Government, the States Government and the local governments. Medical services are also provided by private practitioners and voluntary organizations - usually the missions.

In most urban centres the Government usually provides one hospital, though in some there may be two hospitals. In a few urban areas the missions have established medical centres - either a dispensary, a maternity home, or a hospital. In the urban areas, however, there are several private medical centres - hospitals and/or clinics.

While it has often been rightly stated that there is a concentration of the majority of medical care services in the urban areas, it is equally true that most of the services belong to private practitioners and individuals. These are commercially-oriented and are available to those who can pay for the services. Government institutions are very few and only meet a very small percentage of the urban population they serve. It is also true that the urban slums do not often enjoy these medical facilities.

With regard to leprosy control within urban primary health care, Dr Adeleye said that the Nigerian Government has established a National Leprosy and Tuberculosis Control Programme which is just being implemented, although the leprosy control programme has been in evidence since the early 1950s mainly in three regions - Northern, Western and Eastern Regions respectively. With the creation of states, each state runs its own control programme. Although control programmes in the various regions and states have a common base, there is no uniformity of activities as is expected of the National Control Programme. There is no focus on specific areas such as the urban problem.

The established National Leprosy/Tuberculosis Control Programme is based on Primary Health Care approach. Primary Health Care has been well established and now forms the mainstay of a health care delivery system aimed at achieving health for all by the year 2000. Among the problems envisaged in the urban areas, Dr Adeleye grouped them according to whether they were determined by social or medical factors.

Social factors

- (i) Many of the patients either left their homes and moved to the urban areas to hide their disease, or were driven away by their communities.
- (ii) Some had left their homes to find jobs and then developed or contracted the disease.
- (iii) There are others who had moved into urban areas to seek alms. This group tends to be mobile.

- (iv) There are other groups who are normally indigenous or residents of the urban area who have found themselves with the disease.

Medical factors

- (i) There are inadequate medical facilities for leprosy patients in the urban areas.
- (ii) Most of the medical personnel working in the urban areas have very little or no knowledge of leprosy to be able to recognize or diagnose the disease.
- (iii) Private practitioners do not accept leprosy patients for medical care for some obvious reasons, namely:
- (a) Their services are commercially oriented, and leprosy patients cannot pay their bills.
- (b) There is the fear that they would lose their other patients.
- (c) Their personal fear of the disease.
- (d) The chronic nature of the disease. They want to see quick results in their patients which cannot be the case in leprosy.
- (e) The leprosy patients may be reluctant to take treatment from such institutions because of the cost of treatment and because they wish to avoid exposure especially when deformities are already developing.

In Dr Adeleye's view, the solutions to most of these problems hinge on proper and adequate education of the people at all levels of society. All medical personnel must be taught about leprosy as a disease: how to recognize it, accept it, and how to treat patients accordingly. The patients must see themselves as persons suffering from a disease that is no different from other diseases. They must free themselves of the self-social stigma and self-ostracism which tends to be the pattern of life for most of them.

The education is designed to be broad based covering schools of various grades and all learning institutions. Plans are being made, he said, for the medical, paramedical and all health institutions to include adequate teaching of leprosy in their curricula.

It is planned to improve the knowledge of those in practice by seminars, clinical meetings and teachings in post-graduate training. It is also planned that continuous public education be carried out by the Health Education Division of the Ministry of Health through the use of all available media which is suitable for public propaganda in the various localities, e.g. radio, television, local artists - dramatization by schools and local artists, recitation in local languages or dialects - posters, handouts, etc.

The governments have set up various community development programmes, e.g., "MAMSER" which is designed for social and economic mobilization of the public. The staff of this programme can be used to motivate public interest in leprosy.

2.12 Leprosy control in urban areas in Kenya was presented by Dr Owili. Until the Second World War, services mainly consisted of small "leper settlements", for example in Malindi, Lamu, Kakamega and Tumbe. More systematic work was started in 1948 when chemotherapy with dapsone was introduced.

From 1951 to 1957 a large leprosarium for 300 patients was built at Alupe Busia District. From the early 1970s onwards, a number of leprosy control projects were initiated by the Kenya Government with the assistance of the Netherlands Leprosy Relief Association, e.g., West Kenya Leprosy Control Scheme, the Meru and Kitui leprosy projects and the Coast Leprosy Control Scheme. They were brought together by the National Leprosy Control Programme in 1976 and were subsequently absorbed by the National Leprosy Control and Tuberculosis Programme (NLTP) which was launched in 1980 by the Kenya Government to combine and integrate the leprosy and tuberculosis control activities into the general health services. The NLTP estimates that at present about 20 000 to 25 000 patients suffer from leprosy, a prevalence of 0.95 - 1.18 per 1000 population.

The number of registered cases has decreased from 8 812 in 1981 to 6 558 (0.31 per 1000 population) in 1986. However, the case detection rate for this period has remained practically the same (about 3.5 per 100 000 population).

Dr Owili then provided the following statistics from the main cities in Kenya:

City/Provincial Towns	No. of cases at 31.12.86	Prevalence if regis. per 1000 population	New cases detected during 1986	Case detection rate per 100 000 population
Nairobi	110	0.09	20	1.63
Nyeri	29	0.05	1	0.15
Mombasa	401	0.87	7	1.52
Kisumu	858	1.27	56	8.26
Nakuru	39	0.05	5	0.64
Kakamega	162	0.12	16	1.18
Embu	62	0.17	14	3.85

For efficient leprosy control in urban areas, the following activities are essential: early case-finding and diagnosis; chemotherapy in correct dosages or appropriate duration; case-holding and default prevention; disability prevention and rehabilitation; adequate recording, registration and reporting.

In the urban areas of Nairobi, Nakuru, Kisumu and Mombasa where dermatology clinics have been established, most of the leprosy patients are detected through casual finding when they present themselves with other skin conditions.

Dr Owili said that some of the patients were presenting themselves voluntarily since continuous health education programmes in the urban areas has made the population aware of the early signs and symptoms of leprosy. However, it has not been possible to use regular examination of contacts of known cases, especially family members or primary schoolchildren in urban areas, as a method of case-finding.

2.13 Dr Mputu reported that Kinshasa was a fast growing city attracting large numbers of people from the rural areas of the country. Of the three million inhabitants, only a small proportion was formed by the autochthonous "Kinois".

Up to 1984, leprosy control in Kinshasa was assured by the Hôpital de la Rive. This hospital, with its ambulatory service, had to face the enormous task of trying to cover the whole of the city and at the same time serve as the National Reference Centre for patients from all over the country. None of the other medical institutions in the capital participated in the control activities. In 1984, a special leprosy control unit was created and the annual number of newly detected cases has increased considerably.

The Urban Leprosy Control Unit is organized on an ambulatory basis. Its nurses pay regular weekly visits to 16 health centres dispersed over the city and integrated into the urban primary health infrastructure. The nurses of the Leprosy Unit execute the following tasks: detection; skin smears; treatment; monthly follow-up and health education. In the meantime, the Hôpital de la Rive has limited its actions to ulcer care, care of old institutionalized cases, often handicapped and without treatment or on dapsone monotherapy, and treatment of the occasional new case referred to them by other medical institutions.

In March 1988, a joint leprosy-tuberculosis seminar took place in Kinshasa. Following its recommendations, the National Leprosy Office has now adopted the WHO treatment regimens as the national strategy for Zaire, and all Kinshasa patients now receive the WHO-recommended regimens.

Referring to health education, Dr Mputu said that although the National Leprosy Office has retained this activity as one of its priorities, it has not yet been properly planned. However, since most new cases present themselves spontaneously, it would suggest that the disease is known by the population. It should also be noted that no traditional stigma attached to leprosy exists in Zaire. Leprosy patients are not ostracized, especially not in the rural areas. However, among the more educated in the city some "fear of the leper" is becoming manifest. This is clearly an imported phenomenon.

The health education of the patients is well organized and quite effective, since the occurrence of new deformities among the patients followed-up remains very low.

Dr Mputu said that training of personnel remains a problem. With the support of the WHO a nationwide training programme is being developed. Within the next five years, all health personnel, urban and rural, at all levels will receive basic leprosy training. Although the Hôpital de la Rive is dispensing some ulcer care, the physical rehabilitation facilities in Kinshasa are seriously lacking. Patients in need of specialized rehabilitative care are sent to a mission hospital 250 kilometers outside the capital. The Damien Foundation, Belgium, covers the cost of their hospital care.

2.14 Dr Castellanos made his presentation on Mexico City which, with 20 million inhabitants, has a leprosy prevalence rate of 0.06 per 1 000. This includes a large number of patients who have migrated from the most endemic areas in the country. The global distribution of patients in the urban and rural areas of the country amounts to approximately 50% per area.

The urban areas are not adequately prepared to absorb the migrating populations from rural areas. This results in the development of so-called "misery belts" which lack health and sanitary facilities, thus favouring the transmission of diseases, including leprosy.

In the capital city, districts and other big cities, there are dermatological services available with highly specialized leprosy personnel. These dermatological services provide training, supervision and evaluation for the general health services personnel; they also serve as referral services.

In the urban health centres, suspected cases of leprosy which are detected by general health workers are subject to diagnostic confirmation by specialists from the districts. These specialists also hold dermatological clinics in leprosy endemic areas so as facilitate the early detection of new cases.

Recently, the national programme adopted the multidrug regimens recommended by WHO as the standard treatment for leprosy.

2.15 Leprosy control in Istanbul was presented by Dr Saylan. About 53% of Turkey's population live in urban areas of which the most densely populated, Istanbul, had, in 1985 a population of 5.8 million. Most of the leprosy patients living in Istanbul were born in the east and central Anatolian provinces and migrated many years previously. Some of them return to their home villages after they retire or become unemployed; others settle permanently in the city but visit their relatives from time to time; the rest break all their links with the rural area. A few patients (7) who were born in Istanbul belong to old Greek or Armenian families.

According to present data, there are 193 leprosy patients living in Istanbul; 130 (67.4%) of them are males and 63 (32.6%) females. Eighty-five (44.0%) have their own houses and 75 (38.9%) live in rented rooms or simple flats. One hundred and twenty nine (66.7%) receive a kind of social security or pension for handicapped or elderly people, 64 (33.1%) have no social security and 18 (9%) are working in the leprosy hospital. Fifty-seven (29.5%) of the patients are illiterate.

With regard to treatment, Dr Saylan said that 139 (72%) of the 193 patients were on MDT. The rest either continued on dapsone monotherapy or were given special treatment regimens because of old age or other reasons. A number of patients stopped treatment after being given a single dose of rifampicin 1500 mg.

Seventy-two (51.5%) of the patients completed MDT after having taken their treatment either regularly or at acceptable intervals. Fifty-eight (41.5%) patients are still continuing MDT and five (3.5%) have been excluded because of complications. However, only 14.4% of the cases on MDT were treated regularly.

There are many factors effecting the regularity of treatment for patients on MDT in Istanbul, such as the level of education, economic situation and service at the health centres so we can assume that "monthly supervised treatment" is not easily applicable in the urban areas.

To visit each patient regularly in the urban areas needs manpower, money and organization. On the other hand, most of the patients who have migrated live in the outskirts of towns with no fixed address. It is a fact that an educated patient with a permanent job, social security and a house of his own becomes more aware of his condition, follows his treatment and allows his family contacts to be examined. Instead of dropping out from control he comes to the centre whenever complications or other health problems arise.

Towards the end of her presentation, Dr Saylan suggested the following measures should be taken to improve urban leprosy control programmes:-

- . More emphasis should be placed on the health education of the patient from the time his first visit to leprosy medical workers. Patients need to know the importance of regular self examination and how to detect "at risk" disease conditions. They should be encouraged to report to the urban referral centres immediately after they move from the rural areas.
- . Local health authorities should be encouraged to be warm and open with the patients so that they can get reliable data about the new addresses. They should also be encouraged to inform the urban authorities about the movements of the patients.
- . All the records should be kept confidential and patients' desire to hide their disease should be respected.
- . Weekend services at the urban centres could be useful for some of the patients who are not able to visit the centre during the week days.
- . Home visits should be organized for case control and contact tracing in the urban areas. This should include budgetary facilities for the running of the programme.

2.16 Dr Motta presented the control of leprosy in the metropolitan area of Rio de Janeiro. Brazil has nine metropolitan areas which have more than one million inhabitants each and where approximately 50% of the country's population live. The official figure for the urban population is 70% of the total population.

Rio de Janeiro, the old capital of Brazil, is an important harbour and industrial area. The "Município" forms the politico-administrative unit; there are 64 municípios in the Rio de Janeiro State, of which 11 are part of the metropolitan area with a population of 10.6 million, i.e., 80% of the State population.

In the "Great Rio de Janeiro" there are 23 887 registered leprosy patients (97.5% of total cases in the State) unevenly distributed in its 11 municípios giving a prevalence ranging from 0.17 to 3.65 per 1 000 inhabitants. The detection rate has shown a continuous increase from 528 cases (7.89 per 100 000 population) in 1960 to 2 010 cases (15.6 per 100 000) in 1987.

A study made on the origins of all new cases detected in Rio during 1987 indicated that 28.6% of the cases were born in Rio de Janeiro and that 72.0% of them have resided in the city for the last ten years or more. It seems that in Rio de Janeiro transmission of leprosy in the urban environment is real. Control activities were implemented by the

General Health Units following the guidelines of the State Secretary of Health for the "Unified Health System", i.e. all health services from the ministries or from the Social Security are now being unified. These provide a good population coverage (each individual attending clinic 5 or 6 times) and gives 70% of the detected cases, the other 30% are detected by health facilities and university hospitals.

Concerning case-holding, Dr Motta said that all patients on the active register were distributed over 35 health centres that provide treatment. An eighth of these centres also have facilities for physiotherapy and protective footwear. However, 33% of the patients have not been controlled for more than a year and the clinical and bacteriological assessment has proved that, in addition, 25% of the patients can no longer be considered as cases according to the WHO definition of a "case" of leprosy. After a careful evaluation of the leprosy situation, it was clear that no more than 40% of the registered cases should be on the active register.

Policy-making and general supervision of control activities are the function of the "Coordination of Leprosy Control" a branch of the Communicable Disease Control Department. The leprosy staff comprises a coordinator/epidemiologist, a junior epidemiologist, a leprologist supervisor, a nurse supervisor and a social assistant. The information system for leprosy control has been standardized.

2.17 Dr Tabibzadeh, Strengthening of Health Services, WHO, Geneva, made his presentation on primary health care in urban areas and urban growth. The key to attaining the goal of health for all is the primary health care approach, which applies equally to rural and urban situations. This means the development of health systems with primary health care as the central function, supported by the the rest of the health system. To be successful, it requires strong links with health-related sectors, nongovernmental organizations, social security and other agencies dealing with health, and especially strong community involvement. To carry out primary health care, trained community health workers are needed to provide the first contact between the individual and the health system. The type of community health worker varies from community to community according to needs and the available resources.

Mankind is witnessing an ever-growing urban population, particularly in developing countries, which will expand even more rapidly during the second half of this century and beyond. In 1950, out of the total world population of 2.5 billion, 29.4% lived in urban areas. By the year 2000, about 50% of 6.1 billion will be urban populations. By 2025, two-thirds of the projected 8.2 billion population will reside in urban areas. The forecast for the urban population of towns and cities during 1990-2020 for Africa and South-East Asia is 30-60%, and in Latin America 80-85% will be living in urban settings. By the year 2000 about 60 cities will be approaching five million and more, 45 of which will be in developing countries.

In most cities, the underserved population suffers from communicable diseases, malnutrition, chronic and social diseases and live in areas where environmental protection is frequently weak with limited safe water, poor sanitation and shelter. The major issue in cities is how to get the maximum benefit, in the face of the present economic crisis, from the majority of existing care institutions, facilities and resources, particularly to those in need. There is a great need for reorientation of these health services. Their programmes must cover preventive and promotive activities, in addition to curative services. In order to have maximum impact health care institutions should programme their activities in an integrated manner, taking into consideration available resources. Control of diseases, including leprosy, would be attainable if programmes, personnel, resources and the functions and tasks of health centres, institutions, governments and nongovernmental organizations were coordinated, based on appropriate training and the concept of primary health care.

2.18 Dr van Wijnen, representing the German Leprosy Relief Association (GLRA), made his presentation on the Development of Priorities within Urban Leprosy Control Programmes. For many years the GLRA has sponsored urban leprosy control programmes in many cities in the world: Bombay, Cochin, Calcutta, Dakar, Dar-es-Salaam, Madras, Manaus and Poona.

Dr van Wijnen said that, when considering that soon more than half of the world's population will be in urban areas, top priority should be given to the organization and development of urban leprosy control programmes, particularly when, as observed in the GLRA projects, the proportion of MB cases (30-50%) is higher in the urban than in the rural areas. In certain situations, because treatment facilities are of better quality in urban areas, this proportion could reach 60% or more.

To achieve regularity of treatment in situations where there is continuous mobility (up to 30%) of the population, Dr van Wijnen suggested that patients should be offered:

1. a good network of as many permanent health facilities as possible so that wherever patients are they may find a place for treatment;
2. the services of all medical staff, especially general practitioners, general hospital personnel and private clinics; and
3. a central register, a patient's identity card and adequate referral system.

A vertical service cannot achieve widespread coverage of health facilities and therefore a pre-condition for successful urban leprosy control will be integration of control activities into the basic health services and community participation following a PHC approach.

However, quality of services will largely depend on how well trained and motivated health personnel are. Thus, provision of adequate training to all general medical staff was, for Dr van Wijnen, the first priority in an integrated urban leprosy control programme. Since the level of stigma attached to leprosy in cities is usually high, he also indicated the need for health education aimed at the population groups:

- . Health education of the public by TV, radio, talks, mobile exhibitions, slogans in buses and trains, etc.
- . Health education of the medical profession in order to obtain their collaboration, especially general practitioners, university medical teachers and students, nurses, paramedical workers, etc.
- . Health education of other categories useful to leprosy control, such as schoolteachers, social workers, etc.
- . Health education of the patients.
- . Health education should be integrated too, that means not only health education on leprosy but all kinds of health problems and, secondly, health education should be practical, e.g., not advising people to do things they cannot afford to do.

In order to maintain good quality services, Dr van Wijnen proposed dual supervision: (a) multipurpose supervision at the basic health services level, and (b) a more specialized supervision at a higher level with the creation of referral services for problem patients.

Finally, as a special task for NGOs, Dr van Wijnen suggested the creation of a community based rehabilitation programme.

2.19 Dr Ganapati was asked to make a presentation on leprosy and its control in urban areas. He presented estimates and projections of the world's 36 largest agglomerations to give an idea of the possible implications on health care activities in these areas. Of these, 17 large cities, with more than a population of 8 million each, were sharing the common factor of having an appreciable prevalence of leprosy, but it is unlikely that health administrators in these cities, already under pressure with other health problems, will give much attention to the leprosy problem. In such a situation, Dr Ganapati said, there was a need to develop appropriate strategies for leprosy control in urban situations. This need has already been identified by the 5th and 6th Expert Committees on Leprosy (1976 and 1988).

Dr Ganapati mentioned that overcrowded conditions in urban areas provides excellent opportunities for the transmission of the disease, particularly when large numbers of multibacillary patients are not receiving adequate chemotherapy. In fact, there is some evidence that the urban pool of infection emanating from hyperendemic slums may lead to the spread of disease to far off places through emigration. In such situations, he said, there was a need to study rural/urban migration patterns in different cities and for urban leprosy programmes to have better coordination with their rural counterparts.

For case detection, simple and cost-effective methods suitable for metropolitan areas have to be considered in the light of urban primary health care. However, innovative methods suitable to specific urban situations should be identified.

Referring to case-holding and treatment delivery, he mentioned that the difficulties encountered in case-holding were mainly in relation to the prolonged nature of treatment and patients' mobility. Lack of coordination among agencies, leading to multiple registrations and the desire of some patients to remain unknown, were also creating difficulties in case-holding. Nevertheless, some experiences have shown that if treatment facilities are offered in an integrated manner in a general medical set-up, case-holding becomes easier. This would also apply to the care of patients after completion of treatment and to the provision of services for reconstructive surgery. In this respect Dr Ganapati mentioned that the very existence of leprosy colonies and the provision of exclusive leprosy services were serious deterrents in the education of the patients and the public on the positive aspects of integrated leprosy work.

Another important activity was to provide a comprehensive education on leprosy to the community. In this aspect urban situations were much better equipped than rural, and the media facilities could be used to a great advantage. The teaching of leprosy in medical and paramedical schools and the task-oriented training of all categories of health staff were most important for the control of leprosy and its integration into the general health services.

With the introduction of MDT and its relatively short duration, there was a need to give more attention to the prevention of disabilities and the physical and vocational rehabilitation of patients. Community-based rehabilitation (CBR) is currently being introduced in some urban programmes.

3. GROUP DISCUSSIONS

The participants were divided into three groups to discuss the following topics:

1. Case detection and treatment delivery.
2. Training and health education.
3. Disability prevention and rehabilitation.

All groups held discussions on identifying coordinating mechanisms for the optimal utilization of resources to achieve leprosy control.

The following is a summary of the group reports.

3.1 Case detection and treatment delivery

Because of the social stigma associated with leprosy and the peculiar situation in the urban areas, case detection and treatment and case holding deserve special consideration.

The various methods for case detection in urban areas are:

- . Self-reporting and referral by medical personnel or relatives of patients or the public.
- . School surveys in hyperendemic areas should be encouraged and conducted by the regular school services.

- . Contact survey.
- . Surveys of selected groups of population, e.g., slum population.
- . Rapid survey. People who have been previously informed about the signs and symptoms of leprosy and who report to the survey team on a fixed date and time are examined.
- . Multipurpose survey.

It was noted that some of these methods may be practicable in some urban areas, whereas in others they may not be. While mass surveys may be easily applicable as a tool for case detection in some areas, in others they may prove impracticable and in some be impossible to impose. Health education will therefore have to be intensified to facilitate self-reporting and motivate acceptability of any methods that may be applied.

Screening for leprosy should be systematically done in selected groups of the population such as schoolchildren, the military, the police, industrial establishments, etc., as part of general health screening.

Contact surveys have been used with success in some areas while envisaged as a difficult task in others especially where different people from different communities live together. Contact surveys should be carried out whenever practicable.

Other possible facilities for case detection include use of:

- health visitors;
- religious leaders and organizations;
- community health volunteers, especially women in some communities;
- medical personnel;
- medical students for screening purposes; and
- traditional healers and alternative health systems of medical care.

Health education (public education) forms the backbone for case detection whatever method is used. This will have to be intensified and must be continuous using all available and suitable media for the dissemination of the health education campaign.

Training and retraining of health personnel of all grades is essential to enable them to recognize leprosy and be effectively involved in case-detection.

Integration of leprosy into general health service schemes will reduce stigma and make case-detection an easier task.

In some areas leprosy patients have been used to assist in case-detection and case-holding.

Good leprosy care services with a good patient/health personnel relationship is known to be good at motivating patients to report especially when treatment is effective and the patients enjoy the care and love of the health workers.

3.2 Treatment delivery and case-holding

Efforts must be made to put all known cases that require treatment on MDT.

Integration of leprosy care, e.g., into general hospitals, teaching hospitals and dermatological clinics, will improve treatment compliance. However, where integration has not been possible, the leprosy workers should meet the basic health needs of their patients. Similarly, other general care for complications of leprosy, e.g., ulcer, limb care, footwear, etc., will encourage the patients to report regularly for their treatment and therefore enhance case-holding.

The quality of services provided is a strong motivator for regular treatment and self-reporting for surveillance. A good and regular interaction between the health worker and his patients is essential. There should be a good functional relationship between the urban leprosy workers and those in the rural areas to allow easy reference if the patients have to travel to those areas.

Monitoring therapy, by random checks of urine and/or tablet count, may help to assess whether the patients are taking their drugs regularly.

Health education and the quality of services provided are the greatest motivating factors in case-holding and treatment. It must be effectively applied and continuous. None of the methods highlighted can replace health education in motivating the patients and the health workers must therefore provide an effective health education system.

3.3. Training

Training should be organized not only to impart new knowledge but to enable each category of health personnel to do the defined task efficiently. Hence the training of different levels of staff should be flexible and its contents should be adapted to local needs and resources.

The objectives of a training programme should be to:

1. improve the general level of understanding about the disease.
2. motivate health personnel to contribute to leprosy control by fulfilling the specific tasks within the scope of their own duties.
3. improve coordination within health services and bring up the efficient team work approach for early case finding, continuous case holding and rehabilitation of patients.

It is believed that training and development of training and training modules should be organized by the national health and leprosy authorities in collaboration with NGOs for different categories of workers involved in urban primary health care. These should include: community health workers; supervisory staff; other support staff like laboratory technicians, social workers and general practitioners. In urban areas, it is necessary and advantageous to involve practising dermatologists and other specialists (ophthalmologists, orthopaedists, reconstructive surgeons, etc.) to provide technical support to primary health care.

At the level of community health worker, it was felt that the most important objective of training would be to enable the worker to identify suspicious early cases of leprosy and appropriately refer them for diagnosis and treatment. The worker should be able to maintain documentation of existing leprosy cases in his area of work and regularly monitor treatment of patients. The training should also enable him to identify complications like impending nerve damage, inflammation of the eyes, or reactive episodes to help the patients by referring them to the appropriate centre for necessary advice in time.

At the level of supervisory staff, as well as the above-mentioned tasks these staff should be able to carry out effective patient counselling and provide guidance to workers who are actively involved in control activities.

General practitioners should be given orientational training to reduce stigma and to enhance their interest in and knowledge of leprosy so that they can differentiate between leprosy and other common skin conditions that may simulate it. General practitioners should be able to treat leprosy, identify reactions, relapse and complications for referral and should avail themselves of the benefits and support provided by the referral centres, laboratory services and specialists, etc.

Brief orientation courses in leprosy should also be given to teachers, social workers and other professionals involved to enable them to assist with case-finding among schoolchildren and to strengthen public education programmes.

In-service and basic training on leprosy should be integrated into on-going training programmes. It was recommended that all the training programmes should be conducted in local languages. In order to improve the efficiency of the training programmes, a continuous evaluation of the students should not be neglected.

3.4 Health education

The objectives of health education are to increase information, communication and understanding on leprosy so as to: (i) reduce the social stigma against leprosy; (ii) increase the confidence of health workers in the field of leprosy; (iii) encourage the patients and their families to collaborate with the leprosy control health workers.

Health education should be included in every leprosy programme by every means possible and be continuously stressed during the development of activities. Health education in leprosy should be realized by all health workers as an important duty and should be conducted in conjunction with health education in other diseases. In addition, health education should not be implemented by just putting the message across to the people, but should be properly planned and designed with a view to achieving desirable knowledge, skill and understanding at each level of the target group. Special assessment may be necessary (a) to determine the training needs; (b) to investigate the cause of prejudice and (c) to design proper methods and approaches of communication strategies.

Health education should be directed to the following target groups:-

1. The patients and their families. Every patient must be convinced that treatment needs be taken regularly and that contacts should be examined separately. The patient should also be instructed to observe changes in physical conditions during treatment, i.e., change in skin conditions, signs and symptoms of impending nerve damage, etc., and report to the nearest health post. They should know about self-care of the limbs and eyes in order to prevent disability, particularly women who have to cook or farmers who have to use tools and instruments that may aggravate the disability.
2. Health authorities at all levels - physicians, social workers and health staff. Appropriate educational methods and tools such as videos, films, manuals, etc., should be made available and demonstrated properly to convince people that it is curable and to help overcome the prejudice against the disease. The necessity of care, promotive persuasion by face-to-face counselling and a friendly approach should also be stressed. Employing treated patients is also a promotive measure.
3. Community and the public. Health education should reach every section of the population and this can be made possible by the active involvement of primary health care staff. The methods used can be adapted by the communities to suit each local situation. The general public, particularly the mass media, religious and community leaders and people in slum areas must be made aware of the cause, transmission, early symptoms and treatment of the disease by means which neither exaggerate fear nor minimize the danger of the disease. To prepare new generations to have a better attitude towards the disease, health education in all schools should be enforced. Apart from increasing awareness and the need to seek advice from health workers at the earliest opportunity, facilities for diagnosis and treatment should be obtained.

3.5 Disability Prevention and Rehabilitation

In order to minimize the problem of disability in leprosy, the following aspects ought to be taken into consideration:

1. Early detection and proper treatment: This is the first and most important step in disability prevention but since it has been discussed by the first Group it will not be discussed again.
2. Early detection of nerve involvement. Training of health staff including general practitioners and medical students. The important tasks to be taught include:

- (i) Palpation of nerve trunks affected by leprosy.
- (ii) Test for sensory/sweat loss.
- (iii) Voluntary muscle testing, simple tests - close the eyes; thumb, little finger opposition; dorsi-flex the foot.
- (iv) Recognition and management of reversal reaction and ENL.
- (v) Provision of simple manuals and organization of short-term orientation courses for general medical practitioners, medical students, nurses, etc.
- (vi) Inclusion of leprosy and particularly nerve involvement in the medical curriculum.
- (vii) Generate an interest in leprosy in the following departments of medical colleges or specialized hospitals: dermatology; community medicine and department of infectious diseases; neurology; ophthalmology; reconstructive/plastic surgery; microbiology; pathology and immunology; ENT; general medicine.

Some of the methods to generate such an interest would be: (a) seminars on the respective topics of interest; (b) research collaboration, and (c) provision of teaching and educational materials.

Patient education: It needs to be emphasized that the first contact with the patient is most important. Patient education can be done through: person-to-person talks; group talks; educational posters, photographs, charts, etc., simple illustrative booklets for literates.

The topics on which the patient needs to be educated are: subjective loss of sensation (sweating); subjective muscle weakness; signs of reversal reaction, nerve pain and red eye; immediate reporting of the above signs.

3. Prevention of nerve damage and treatment of early nerve involvement:

- (a) Identify the "at-risk" patients, e.g., patients with thickened nerve, acute inflammation of skin lesions and a history of recurrent reaction. Such patients must have more frequent and regular checkups and more extensive patient education.
- (b) Prompt treatment of "at-risk" patients with reversal reaction and neuritis: (1) cortico-steroids; (2) rest to the affected nerve; (3) surgery (decompression) wherever indicated.

4. Prevention of disabilities and deformities: (a) patient education; (b) protective footwear and other devices like gloves, goggles; (c) physiotherapy; (d) change of occupation if the occupation is hazardous; (e) surgery (decompression/anterior transposition) in selected cases; (f) prompt treatment of eye complications.

Some of the above methods of prevention should be done at the health worker level and some at the referral level.

5. Management of disabilities and deformities (physical rehabilitation):

- (a) patient education
- (b) frequent and regular follow-up
- (c) physiotherapy
- (d) special footwear and protective devices
- (e) reconstructive plastic surgery and follow-up
- (f) treatment of eye complications

6. Prevention of debilitation:

(a) Maintain employment of the patient:

- . patient education, motivation and cooperation
- . employer contact and education
- . legal means of protection
- . change of occupation and retraining if needed

(b) Maintain social relations of the patient through:

- . the family
- . patient education
- . family counselling
- . mobilization of support from community leaders
- . extensive community education and awareness programme
- . legal protection of the rights of the patient
- . social assistance if needed

7. Social and vocational rehabilitation. The following points need to be emphasized:

- it must be community based
- it must be integrated
- institutional rehabilitation must be discouraged, and if at all necessary, must include other disabled and not just leprosy patients
- vocational training and job placement of the patient. If this is not possible, assistance may be given for job placement of a dependent or a collaborative venture between the patient and dependent.
- cottage (home) industries.
- assistance in marketing and quality control
- patient cooperation
- community participation and support
- legal protection
- pension schemes

8. Beggar problem

(a) The problem of leprosy beggars should be correctly assessed and projected in relation to the total leprosy problem and should not be exaggerated.

(b) The problem must not be viewed in isolation but as part of the general beggar problem. Attempts must be made towards preventing leprosy patients becoming beggars:

- institutional care must be limited in time to prevent alienation of the patient from the family
- children should not be separated
- all the social needs of the patient must be met
- charitable help to beggars must be routed through governments or NGOs rather than through individual charities

Rehabilitation of beggars must be attempted through:

- re-education
- providing new opportunities

It is noted that the problem of beggars is not fully assessed or understood in all its aspects. Sociological research studies must therefore be carried out on this subject and appropriate interventions developed.

It should be emphasized that given the limited resources available for leprosy programmes, resource allocation for rehabilitation activities should not be at the expense of case detection and treatment. Further, between rehabilitation of the disabled and disability prevention, it should be clear that absolute priority should be given to disability prevention.

3.6 Coordination

All the above activities of disability prevention and rehabilitation must be carried out as a multi-sectoral collaborative effort between all relevant sectors/ministries such as ministries of health, social welfare, labour, home affairs, education, city health services and NGOs. Such multi-sectoral collaboration is particularly necessary when leprosy control activities have been fully integrated into the general health services.

3.7 Research topics

The following topics of interest were identified for future research.

1. Knowledge, attitude and practice (KAP) study of medical schools and medical teachers.
2. The relationship between industrial workers with leprosy and their employers, their fellow employees, trade unions and industrial health services.
3. Attitudes of mass media.
4. Migration patterns of patients versus non-patients.
5. Utilization of health services.
6. Transmission patterns in slum areas.
7. Urban leprosy versus urban AIDS

4. CONCLUSIONS AND RECOMMENDATIONS

1. It should be recognized that in leprosy endemic countries leprosy occurs as commonly in urban areas as in rural areas.
2. The need to organize leprosy control in urban areas in a coordinated and integrated manner, and within urban primary health care utilizing all available resources, is vital.
3. Leprosy control within urban primary health care should be supported through specialized leprosy services for the purposes of referral, technical supervision, coordination, evaluation and training.
4. Multidrug therapy, as recommended by WHO, being the most effective tool for leprosy control, should be implemented vigorously in all urban areas; to facilitate this it is important to ensure that the necessary drugs are always made available to the treatment centres.
5. Urban leprosy control programmes should organize regular training and orientation programmes for all categories of health workers in medical and other schools for health professionals in order to ensure their participation in disease control activities. This is particularly important for general medical practitioners.
6. In view of the number of services likely to participate in urban leprosy control, it is important to have an adequate information system through a central registry and a system of cross notification. All participating health facilities including GPs should be encouraged to report to the central registry.

7. Health education along with availability of quality services is the key to the success of urban leprosy control. Health education directed towards promotion of case detection, case-holding and a reduction in social stigma should involve all sectors of urban services and exploit all available media. Involvement of the community in all these activities, including social leaders, is very important and should be promoted.
8. Rehabilitation of disabled patients in urban areas poses special problems like ensuring employment which requires coordinated multi-sectorial action. The problem of beggars with leprosy needs to be tackled within the overall context of the beggar problem in general.
9. Where multiple agencies are involved in leprosy control, it is important that they coordinate their activities through appropriate mechanisms set up locally by official health services.
10. Leprosy control activities in urban areas require a concerted effort by all relevant sectors. It is therefore important that coordination mechanisms for such inter-sectorial collaboration be set up and should include, apart from the ministry of health, ministries of social welfare, education, labour and the interior, the city municipal services and NGOs.
11. It would be useful to carry out health systems research in relation to urban leprosy control in selected cities.

CONSULTATION ON LEPROSY CONTROL WITHIN
URBAN PRIMARY HEALTH CARE

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