NEW DEVELOPMENT IN NATIONAL LEPROSY CONTROL PROGRAMME AND THE ISSUE OF INTEGRATION

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BACKGROUND

The history of leprosy in Ethiopia before the 20th Century is not well-documented other than the traditional assistance given for many centuries by the Ethiopian Orthodox church, in the name of Gebre-Kirstos, patron Saint of leprosy patients. The assistance was given to those patients who lived around its churches and monasteries. Today, alms seekers and deformed leprosy patients still crowd around churches on church feast days begging for alms from the church and the faithful. Dr. Feron from France was the first to attempt to provide "modern " leprosy care at the beginning of this Century .He had obtained permission to care for leprosy patients outside Harar town. The project was known as St. Antoine's and still exists today as a typical old leprosy village just outside the city. Specialized hospital care began in 1930 when the Sudan Interior Mission (SIM)2 built a leprosarium in the suburb of Addis Ababa to care for the growing number of patients in the city. The foundation stone of the former Princess Zenebe Work Memorial Hospital, now called Addis Ababa Leprosy Hospital was laid in November 1932.

Also in 1930 in Tigrai Region, an institute for the scientific study of the disease and its treatment was established in Selekleka by the Order of Malta. Here an agricultural settlement housed 500 patients and a further 100 were treated in the hospital. The Institute was later destroyed during the ltalo-Ethiopian War (1936-41). (1)

Development of Leprosy Control (1955-1983)

During the period 1955-1961, a UNICEF- supported programme started operation. During this period, care of leprosy patients was carried out by Addis Ababa Leprosy Hospital, St. Antoine's in Harar and the leprosarium in Shashemane and 12 provincial clinics. A total of 30,000 patients were registered during the period of this programme. A WH O Consultant assessed the UNICEF -supported leprosy programme in 1958 and 1960. In 1960, he advised integration with existing and proposed health structures. He also advised that such integration should include mobile circuits from the provincial health departments.

In 1959 aid was requested from missionaries to help the growing number of deformed patients. As a result, four leprosaria were immediately established: Bisidimo in Hararghe Region, Borumeda in Wollo Region, Gambo in Arssi Region, and Gendeberet in Shoa Region. In 1964 Tibela (Addis Hiwot) started as an Agricultural Training Centre to give skills to 800 patients transferred from the Addis Ababa leprosarium.

Leprosarium care focussed mainly on providing homes, food, occasional medical care and some security for the increasing number of patients and deformed cases in Addis Ababa. Most of the leprosaria treated local leprosy cases who came to them but very little was done in the control field. .There was no organised health education programme. Shoes were not provided. Cases of reaction neuritis

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[2] Now renamed Society of International Missionaries (SIM)

or other complications were to stay in the leprosarium for an indefinite period. (I) The deficiencies of this programme were many: limited medical supervision, provision of aid to already deformed cases, no case holding, no case finding nor any follow-up of treatments undertaken, etc.

In 1970, the Ministry of Health approved a policy of leprosy control for the whole country, based on a system of market clinics, mobilising health workers with basic training only. They had to travel on horse/mule-back to bring leprosy treatment to people who were not yet registered. (1)

The basic training for leprosy health workers consisted of academic training upto 8th grade, a 2- 3 month course in leprosy, and in-service training and refresher courses (the latter carried out in the field by supervisors from the National Leprosy Control programme). These courses were usually offered during the rainy season when regular field work was not possible.

The supervisors of leprosy health workers were, health officers, sanitarians and registered nurses. They usually had specific training for leprosy work. Most of them had taken courses at ALERT. (I)

The provincial leprosy control officers were doctors in the case of voluntary agencies. The headquarter provided the supervisory staff for high endemic areas. The number of the estimated cases in 1955 was 150,000 or 5/1000 population.

The idea of opening clinic during market days was to make it convenient for the patients to do their shopping or selling and at the same time to collect their drugs. The intention was to detect as many new patients as possible during the session (I).

However, the drawback to this session was that it did not facilitate integration of leprosy control activities with the generalized health service as most of the health services had a great number of patients with other acute diseases. Consequently, priority could not be given to leprosy patients.

It has been observed since that there was no difference whether due consideration was given to leprosy patients during market days or during other days of leprosy clinic sessions.

In 1978, the Ministry of Health issued a guidelines approving a policy of gradual integration of leprosy control activities into the basic health services. The main objectives of this policy were to increase coverage, to improve the quality of services offered, and to reduce the prevalence and incidence rates of the disease. (2)

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[1]The guideline described the organizational structure, administrative procedure, methods of integrating leprosy control activities into the generalized health services, the system of drug distribution, the role of NLCP, etc. at primary , secondary and central levels.

In the implementation of this policy, the first step taken was to upgrade the 150 existing leprosy health workers to become health assistants. To this end, a new health assistants' school was opened at Shashemane General Hospital where leprosy control programme was already integrated. At the end of the course, 147 of the health workers graduated as health assistants and were attached to health facilities in their respective areas. Presently, they are doing comprehensive work with emphasis on leprosy control. (2)

The second step taken was to place supervisors under the regional medical officers of health. Today, six out of nine regional leprosy supervisors are technically and administratively responsible to the regional medical officer of health and all are doing well. (2)

Realizing the magnitude of leprosy , both the Ministry of Health and the Medical Faculty If Addis Ababa University decided jointly that medical students, nurses and health assistants should have training in leprosy before they graduated. This was a break-through in he spread of knowledge about leprosy among health professionals so that they could accept and participate in the control of the disease. Since 1979,315 nurses, 2,390 health assistants and 21 tutors were trained. No proper evaluation of these trained health workers, participation in leprosy control has been carried out. However, the general observation is

that the stigma of leprosy has been remarkably reduced amongst health professionals. In 1982, the senior staff of the National Leprosy Control Programme, in cooperation with senior staff at ALERT produced the first draft manual for the implementation of MDT in Ethiopia. The manual was at first used as a guideline for the implementation of MDT in five trial areas.

A year later, the senior staff of the National Leprosy Control and ALERT, in consultation with a WHO short-term consultant, revised the draft and produced a National Leprosy Control manual for the implementation of MDT in Ethiopia. The revision was based on WHO's recommendation for chemotherapy for leprosy control programmes. (3)

SITUATION OF LEPROSY TODAY

Leprosy is one of the major public health problems of the country .Its magnitude varies from place to place. Based on the extent of the disease, the country is divided into areas (see Figure I) with:

1) Low prevalence:
   lor less per 1000 population
2) Moderate prevalence:
   2-4 per 1000 population " "
3) High prevalence:
   5+ per 1000 population " "

In areas with low prevalence, the population is scattered and often nomadic. The activities of leprosy control programme in those areas is carried out fully by the generalized health services.

Areas with moderate and high prevalence rates cover the central and south-eastern highlands and are densely populated. There are nine Administrative Regions with moderate and high prevalence rates of leprosy, namely Shoo, Gojjam, WoUo, Arsi, Bale, Gondar, Harrarghe, Sidamo and Wellega. The control programme in these regions is carried out by specialized leprosy clinics and partially integrated general health services. (1)

At present the number of estimated leprosy cases is 120,000, i.e. a prevalence rate of 4/1000 population. At the end of 1983, there were 80,927 patients registered for treatment in 815 treatment centers; i.e. known prevalence rate of 2.4/1000 population, as compared to 84,527 in 1982. There were 3,700 cases less reported than the previous year. This reduction was due to the release of patients in Multiple Drug Therapy programme areas. Of the reported cases in 1983,75,541 (93%) lived in high endemic areas and only 5,386 (7%) were reported from areas with an estimated low and moderate prevalence , rates. There were 6,243 patients detected during the year, i.e. an annual incidence of 2/10,000 population. (8) Of the total registered cases, approximately 50% showed degrees of disabilities.

Leprosy Control Programme Objectives

The main objectives of the National Leprosy Control Programme are the following:
1. To interrupt the transmission of infection and so reduce incidence of the disease to such a level that it does not .constitute a public health problem;
2. To treat the patients in order to achieve, to the extent possible, cure and complete rehabilitation ;
3. To prevent deformities;
4. To integrate leprosy control activities into the generalized health services by stages; and
5. To co-ordinate the work of all agencies engaged in leprosy control programme.

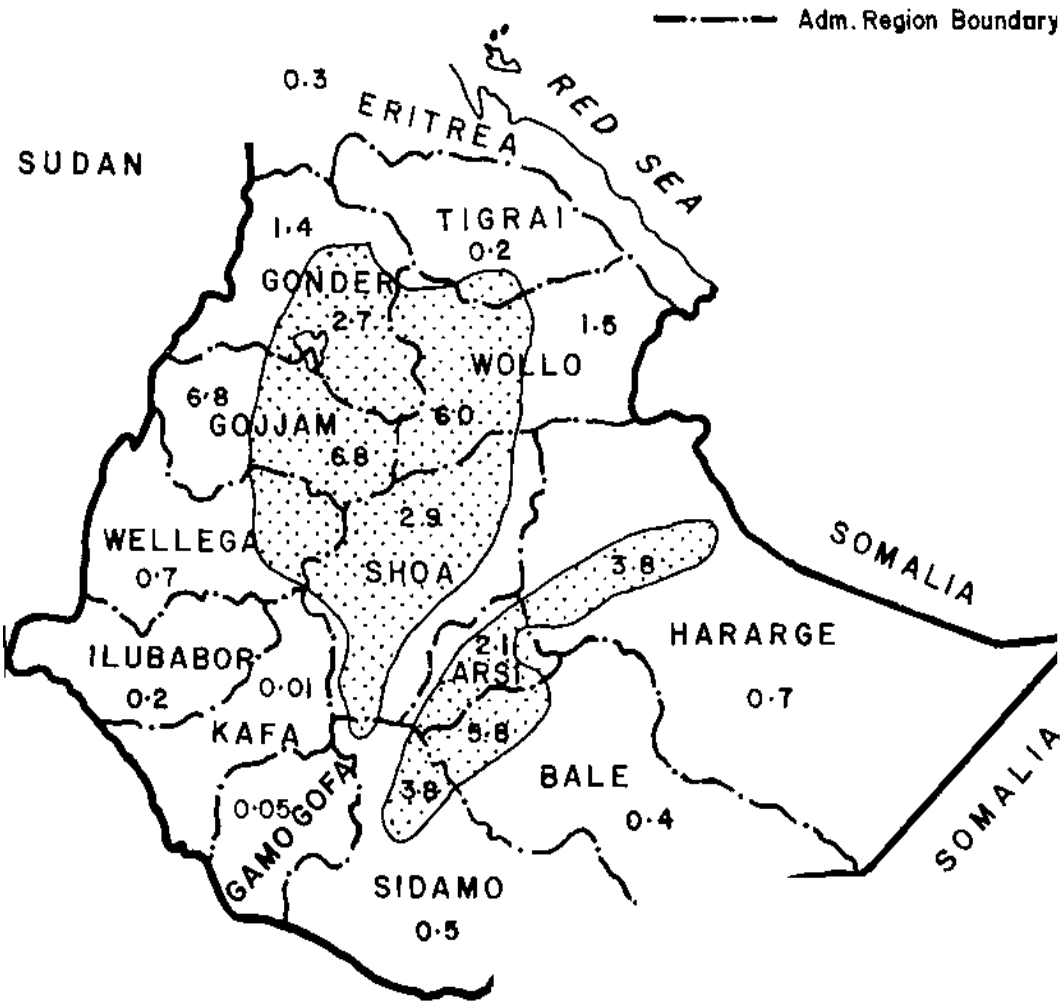
Strategies of Leprosy Control Leprosy control has improved considerably

Fig .1. **known leprosy areas in Ethiopia in 1983**

(**Rate of prevalence indicated separately in dotted lines**)

_____ International Boundary

____. __. ___.___ Adm. Region Boundary



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over the past 30 years. It would continue to improve as knowledge advances and as new tools become available. Dapsone monotherapy was used to control leprosy in the past 30-35 . years. Patients had to take the treatment for long periods but the incidence of leprosy did not decrease to the extent that it was no longer a public health problem. In addition, reports of the last 10 years on bacillary resistance to dapsone were alarming and called for multiple drug therapy.

In 1978, rifampicin was added to the routine monotherapy of daily dapsone for certain categories of patients. Active lepromatous patients were given a single dose of 1500 mg rifampicin once or twice yearly. The objective was to delay or reduce the emergence of dapsone resistance. About 3,000 patients were treated in this manner. The problem with this type of approach was the low regularity in the application of the scheme. In October 1981, WHO convened a Study Group to review all drugs available for chemotherapy of leprosy. The findings and recommendations were published in May 1982 in WHO Technical Report Series No.675 entitled "Chemotherapy of leprosy for control programme". (6)

In December 1982, the National Leprosy Control Programme held a national workshop which produced guidelines for the implementation of the recommended regimens. This was followed by a selection of pilot areas to conduct the application of the recommnded regimens so as to gain experience with the procedures outlined in the guideline.

There were five pilot areas selected in all: four from the National Leprosy Control Programme and one from ALERT. The main criteria used in the selection were:
1. Accessibility.
2. Patients ' compliance,
3. Rough estimate of the workload,
4. Availability of community participation,
and
5. Health manpower availability of basic health services and leprosy field workers,
etc. Details regarding the pilot areas and patients .placed under MDT in 1983 are shown in Table1.

The results obtained so far have been satisfactory .However, the final evaluation 'of the projects will be carried out early in 1985.

Operational Instructions
For the choice of the treatment regimen, patients are grouped according to their classification into two categories (6); I) paucibacillary and 2) multibacillary leprosy .
1. Paucibacillary leprosy includes:
a. the Madrid classification scale I,T
b. the Ridley and J opling classification scale I, TT ,BT
c. Bacteriological index (BI) of less than 2 at any site.
2. Multibacillary leprosy includes:
a. both lepromatour (I) and Border line (b) leprosy in the Madrid classification and LL, BL, and BB leprosy in the Ridley and J opling classifications.
b. all patients reliably reported as having a bacteriological index equal to or greater than 2 on the Ridley scale at any site are classified as muJtibacillary .

The Multiple Drug Regimen for paucibacillary is Dapsone given daily and self-administered. Rifampicin is given once monthly, supervised. The dosages of the drugs are listed in Table 2.

The regimen for a multibacillary patient is as follows: (6)
a.dapsone daily self-administered,
b. rifampicin once monthly, supervised,
c. clofazimine once monthly, supervised and
d. clofazimine daily self-administered.

The dosages of the drugs are listed in Table 3. In short, the strategies of leprosy control are based on the following:

1. Health education, early diagnosis, and early treatment;

Table 1. Clinics and registered patients in five pilot project areas of MDT (1983-1984)

Projects	No of Clinics	Total on Reg.	Patients Assessed	Patients RFT before MDT %	Patients RFT under MDT %	Patients RFT after MDT %	Patients continuing MDT
Bichena	21	3237	2823	1964 (60)	1130	769 (68)	361
Shashemene	1	1377	1372	1003 (70)	300	47 (10)	248
Harerge	13	3062	2872	922 (32)	1127	225 (20)	202
Debrebrehan	8	1562	1562	666 (43)	537	80 (15)	547
Arsi	65	3437	3166	26 (1)	3140	1560 (50)	1406
Total	108	12675	11795	4311	6234	2681 (43)	2674

1. RFT = Released from treatment .

Table 2. Dosage of drugs under multiple drug regimen for paucibacillary Leprosy patients by age

	0-5 years	6-14 years	15+ years
Dapsone (daily)	25 mg.	50 mg	100 mg
Rifampicin (Monthly)	300 mg.	300 mg	600 mg

Table 3 Dosage of dugs for multibacillary leprosy patients by age

	0-5 years	6-14 years	15+ years
Dapsone	25 mg.	50 mg.	100 mg.
Rofampcine (monthly)	300 mg.	300 mg.	600 mg.
Clofazimine (monthly)	100 mg.	200 mg.	300 mg.
Clofazimine (daily)	every other day	50 mg.	50 mg.

2. Maintaining contact surveillance of infectious cases;
3. Follow-up of infectious patients who are irregular in taking treatment;
4. Preventing disabilities;
5. Training of medical and para-medical workers;
6. Follow-up of inactive cases: a) Paucibacillary for two years, and b) Multibacillary for five years;
7. Active community participation; and
8. Monitoring and evaluation of activities. (4,7)

Targets

In line with the National 10-year PerspectivePlan, the following targets are envisaged to be accomplished from 1984 to 1993:

1. To locate 6,000 to 8,000 patients using active case-finding methods and to place them under regular yearly chemotherapy.
2. To put every year 7,000 paucibacillary and multibacillary patien ts under MDT programme.
3. In co-operation with ALERT's training and control departments, to give training in leprosy to the following:-

a) about 150-200 leprosy field health assistants,
b) about 200-300 graduating nurses and health assistants, and
c) about 1000 community health agents.

Training of medical students is carried out by the ALERT training department.

4. To prevent disabilities for 7,000 to 8,000 patients annually by early diagnosis and treatment.
5. To print 15,000 MDT manuals and 1,000 posters for health education.
6. To medically rehabilitate 50% of already disabled cases through existing medical facilities.
7. To orient communities through films, posters etc. about leprosy in MDT areas.

A three-year MDT expansion programme is seen in Table 4. 1983 results of MDT in Bichena are seen in Table 5.

Community Participation

There is no doubt about the fact that Primary Health Care is a vital strategy for improving the over-all socio-economic development and health status of the population. In this respect, the decline of leprosy is a means toward that end. Therefore, one can say with certainty that the Primary Health Care approach as regards to leprosy creates an environment and specific conditions to favour the control and ultimate eradication of the disease. Following the PHC approach, the chairmen of Peasant, Urban Dwellers, and the revolutionary committees of women's associations, as well as community health agents and teachers

are involved in tracing absentees and mobilizing the people for examination during mass or school surveys to detect early cases.

A good example of community participation is the mass survey conducted by the National Leprosy Control Programme from February I to May 14, 1981 in Bichena Awraja in Gojjam Administrative Region. (Table 6) With the assistance of the people described above, 223,402 (95%) people were examined for leprosy and trachoma. Of this number, 814 new leprosy cases, 149 defaulters and two DDS-resistant cases were detected in the survey. About half of the population were found to be infected with trachoma. Of the 814 new leprosy cases detected, two cases of Borderline Tuberculoid (BT) leprosy were discovered in children aged 18 months, although incubation period of less than two years is generally considered extremely rare; This finding indicated that children under two years of age should not be excluded from leprosy surveys in endemic regions. (5,9)

Integration

The policy of gradual integration of leprosy activity into the generalized health services

Table 4. Expansion of MDT programme Scheduled for 1984-1986.

Regions	Project Areas	Patients on Register
Gijjam	Debremarkos	3048
Gojjam	Bahir Dar	3553
Bale	Mendeyu	1542
Bale	Genale	1052
Sidamo	Sidama	3921
Arssi	12 Clinics	475
Harerghe	7 Clinics	1833
Shoa	Addis Ababa Yerer-Kereyu Menagesha	Total 5200
Wollo	30 Clinics	4765
Total		25389

Table 5. MDT in Bichena in 1983

Total Patients	Patients Reviewed	Patients RFT	Patients MDT	Patients Completed MD (RFT)	Patients on Register MDT
3466	2823	1694	1130	769	417

Table 6. Prevalence rate of leprosy/1000 population in four sub-districts (wereda) of Bichena Awraja. Feb.1 -May 14 1981

	Population Examined	No of cases		Total	Prevalence Rate
		New	Old		
Debay Tilatgin	42404	235	596	831	19.6
Enarge Enawga	71225	248	849	1097	15.4
Enemay	68932	182	794	976	14.2
Shebel Bereta	40841	149	413	562	13.8
Total	223402	814	2652	3466	15.5

is gradually bearing good results.

Today, in Ethiopia 10,521 (13%) leprosy patients are fully integrated in 134 treatment centers: hospitals, health centers and health stations: while 48,732 (60%) are partially integrated in 407 treatment centers. Currently, 21,674 (27%) patients get their treatment in 282 specialized leprosy clinics. (8)

The leprosy control programme of the Bahir Dar Project is a good example of a fully integrated model following the policy of integrated model following the policy of integration. This particular Project is financed by the Nowergian Save the children organization. In the Awraja, there are about 3,705 leprosy patients that get their treatment at 15 out-station clinics, 14 health stations and one health center. All cases are handled by generalized health services staff. Supervision is carried out by the health officer of Bahir Dar health center, and occasionally by the senior supervisor of the Head quarters.

CONCLUSION

The chronicity of the disease favours the inclusion of leprosy control activity into community health care. This is so because' of the slow evolution of the disease preced by its long incubation, and equally a long period needed for treatment (be it monotherapy or multiple drug regimen) and follow-up of leprosy patients and their household contact particularly with infectious cases. Leprosy is understood to be a social disease; hence its decline is related to socio-economic development. Thus, leprosy services must evolve as an integral part of primary health care to help improve the over-all socio-economic development and health status of the nation.

Implementation of the following points would help facilitate the realization of the above-mentioried goals:

1. Training and refresher courses on leprosy to all health workers must be continuous.
2. There must be enthusiasm and conviction by all health workers to help the leprosy sufferers like other patients.

3. There should be adequate facilities for the care of leprosy patients at all levels of health services i.e. from diagnostic outpatient to rehabilitation units.
4. Intensive health education about leprosy using available media, both before and during the process of integration, must reach all age groups in order to minimize any stigma of the disease.
5. There must be a clear policy of integration to facilitate an easy implementation at each health service level.

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