Lepr Rev (1986) **57,** 193–198

Editorial

HISTORICAL BACKGROUND TO THE DEVELOPMENT OF LEPROSY CONTROL IN MALAŴI

Introduction to the LEPRA Control Project

During the meeting of the Executive Committee of BELRA (The British Empire Leprosy Relief Association, later to become LEPRA) on 22 January 1963, the Chairman, Sir George Seal, discussed possible arrangements for a special fundraising appeal in 1964, BELRA's Ruby Anniversary. The possibility of setting up a BELRA Eradication Project to commemorate the occasion was being considered and this was referred to the then Medical Committee.

The Medical Committee considered this major proposal at their meeting held on 26 February 1963 (the first meeting attended by Dr R J W Rees) as proposed by James Ross Innes, then Medical Secretary of the Committee, which included such famous leprologists as Ernest Muir, Frank Davey and Robert Cochrane. Dr Muir had considered the project particularly feasible while stressing the importance of personnel. The final recommendation to the Executive Committee was that the idea of a BELRA Pilot Eradication Unit was enthusiastically approved as being entirely feasible provided modern methods and well-chosen personnel were used. Africa was considered the place of choice to include a Unit with two Medical Officers (one a surgeon), two nurses, one laboratory technician, one physiotherapist and one BELRA worker. The project should be based on 8,000–10,000 patients rather than on a given area, and with suitable facilities for two 5-year periods should be sufficient to make a considerable impact on leprosy prevalence in the area. It is interesting to note that at a meeting of the Medical Committee held on 12 November 1963, under the Chairmanship of Dr Rees, and attended by Mr G F Harris, Dr Lewthwaite raised a point in the protocol on the Pilot Eradication Unit and suggested that the following should be included: '. . . there is hope of using BCG to prevent leprosy in young contacts or to use other vaccines if justified by trials.' (Based on preliminary and suggestive evidence for the prevention of leprosy by BCG from the trial in Uganda commenced in 1962.)

0305-7518/86/057193+06 $01.00

Time sequences in the negotiations, assessments in the selection of Malaŵi for the Leprosy Control Project and its subsequent establishment

Following the backing by the Medical Committee in February 1983, a letter giving the broad outline of BELRA's project was sent out by the Chairman of the Executive Committee to all Commonwealth countries in Africa, India, and Pakistan, inviting their views and interest.

By June 1963 the most interested replies had been received from Nyasaland and Kenya. It was noted by the Executive Committee that Nyasaland '... appeared the most promising area for the Pilot Eradication Scheme. The success of such a scheme in Nyasaland would depend on the personal support of Dr Banda, the Prime Minister.'

Advantage was taken of the Commonwealth Conference meeting in London in September 1963 for preliminary discussions with Dr Banda and with the Minister of Health from Kenya by Air Vice-Marshal Crisham, Dr Rees and Mr Harris.

After negotiations, WHO accepted Dr Rees' proposal for backing LEPRA's (formerly BELRA) Pilot Leprosy Control Unit and this backing was received by mid-March 1964. This was followed by an on-site assessment by Air Vice-Marshal Crisham, General Secretary of LEPRA, together with Dr Rees, the Chairman of the Medical Committee. Their report unanimously favoured Nyasaland and this was accepted by both the Executive and Medical Committees of LEPRA.

In July of that year Malaŵi declared its independence and Dr Banda was informed that his country had been selected and he accepted LEPRA's offer wholeheartedly. He even requested that the headquarters for the Project should be placed in the grounds of the Queen Elizabeth Hospital, Blantyre—a most far-reaching and advanced decision at that time—breaking with the tradition and prejudices against leprosy. Dr Banda also made available the Malaŵi Government's Leprosy Officer, Dr Gordon Currie, to be seconded to LEPRA as Project Director.

In September building plans at the Queen Elizabeth Hospital were agreed and Dr Currie came to the United Kingdom for detailed discussions at the beginning of 1965.

Financial and administrative implications

Originally, capital expenditure of some £65,000 was envisaged with annual expenditure of £50,000 for a period of 7–10 years. This was a considerable undertaking for the Association when its total revenue in 1963 was only £170,924. The Executive Committee had also decreed that LEPRA's other work should not be jeopardized by the introduction of this project.

OXFAM had shown an interest in supporting the project and it was agreed that half LEPRA's invested reserves could be used towards the capital cost and half the estimated recurrent expenditure. OXFAM were accordingly informed of this.

Mr Kirkly, the Director of OXFAM at the time, was concerned about the practicability of eradication and the effectiveness of new drugs. This was, to an extent, due to using the word 'eradication' in the title of the project, a word deliberately used from the point of fundraising within the United Kingdom. Support was finally approved by OXFAM following negotiation with the Trustees of the Brown Memorial Fund, a fund available in Malaŵi for leprosy work. Once again, Dr Banda's support was essential in getting a favourable response from the Trustees of the Brown Memorial Fund.

Following further negotiations and periods of uncertainty, OXFAM approved a grant in March 1965 of £10,000 per annum for the following three years. The Leverhulme Trust also supported the work and all the problems in setting up the project were resolved.

The Pilot Leprosy Control Project became operative in the Southern Region of Malaŵi on 25 May 1965 and the Agreement with the Government of Malaŵi was signed at the 42nd Annual Meeting of the Association in London on 22nd June 1985 by His Excellency, the High Commissioner for Malaŵi, Mr M W Mbekeani and Viscount Boyd of Merton CH, President of the Association.

On 1 January 1966, Dr Molesworth, formerly Government Leprologist, Ghana, was appointed as Project Director to replace Dr Currie who was returning to the United Kingdom, and Mr John Eldon was appointed Project Administrator.

The first few years

The broad plan for this project was based on the widely accepted principle that the best method of controlling leprosy is to find and treat all patients with leprosy at the earliest stage, thus preventing the spread of infection and reducing deformity. The initial planning worked out between Drs Currie and Rees had been very detailed and based on domiciliary treatment for the majority of cases, with a small administrative centre in Blantyre with laboratory facilities and a hospital unit providing 36 beds for short-stay patients.

The work was to be organized and directed by LEPRA with the leprologist on the spot taking instructions, where necessary, from LEPRA's Medical Advisory Board (MAB) with the Project Director attending MAB meetings when on UK leave. The project ran in parallel with the Government Health Services and the closest collaboration with the Government, as envisaged in the remarks made by the High Commissioner when signing the agreement that his Prime Minister (Dr Banda), assured the meeting that LEPRA could go to Malaŵi and expect all the

cooperation they wanted from the Government, the medical authorities and the people of Malawi who 'will do everything they can to make the project a success'. The Prime Minister's message went on to say '. . . I hope that the time will come—it may not be in our time: it could be in the time of our children's children, when they will sit back and look at this day and say, well, those people were far sighted, the last leprosy case has gone from Malawi.'

Planning and the build-up of staff and accommodation were carried out in 1965 under Dr Currie, so that active outpatient control could start at the beginning of January 1966 with the arrival of Dr Molesworth. Already there were some 5,000 leprosy cases registered at government clinics within the area, but less than half of these were traced for detailed recording.

Following an initial intention to carry out widescale case-finding exercises, it was decided to put in landrover circuits based on centres within the control area. By the end of 1966 three such circuits were in operation with 4,000 cases under active treatment of whom 2800 were covered by mobile treatment units. Three thousand five hundred cases had been recorded in detail and contacts examined with a 2·5% leprosy prevalence. Considerable effort was put into training Malawian staff and the build-up took place with determination and energy, not only from those in the field, but also those responsible for financing and administering the project.

The aim was to provide treatment within three miles of every patient's home and by the end of 1967 it was estimated that such treatment was available to 8/11ths of the population. By the end of that year the caseload had risen to 6,200. The small hospital had become fully operational and the fourth mobile unit planned.

By the end of 1970 11,000 patients had been registered during the life of the project and already 220 patients had been discharged cured. It now became a project designed to improve its coverage. The main need was for supervision at all levels and on a sustained basis so that the quality of the work did not suffer through repetition and boredom.

In 1972 LEPRA started to plan extension work in Malawi following a feasibility study carried out by its Clinical Consultant, Dr Colin McDougall. Because of his confidence in LEPRA, its staff and methods of working, the President, Dr Banda, in 1973 invited LEPRA to assume responsibility for leprosy supervision throughout the whole of Malawi. This meant that the work expanded to the north under the direction of Dr Gjalt Boerrigter and LEPRA assumed overall co-ordination of the tuberculosis/leprosy control scheme run by Dr Warndorff in the Central Region. This project was fully financed by the German Leprosy Relief Association with whom LEPRA had the closest co-operation.

Dr Molesworth became adviser to the Malawian Government for leprosy control thus ensuring LEPRA's nationwide influence. The original Pilot Project based on Blantyre was handed over to the Government in 1975 but the work elsewhere was gradually being extended. In the original Pilot Area during the 10

years of its life, 13700 cases were registered of whom 8000 were new cases and only 3500 remained under treatment and were transferred to the Malawi Government. The overall caseload in 1975 was 19000 and this figure was maintained until multidrug therapy and short-term treatment were able to reduce the average caseload dramatically.

In view of the cooperation with leprosy control in Malawi with the German Leprosy Relief Association and others, LEPRA was advised to join the International Federation of Anti-Leprosy Organisations (ILEP) and became a member in March 1976. Straight away LEPRA was entrusted with the responsibility of co-ordinating the work throughout the whole of Malawi. The strain on LEPRA's finances was relieved and LEPRA was able to share its expertise with colleagues working throughout the leprosy endemic world.

Broad lessons learned

The original intention was to provide domiciliary treatment within three miles of every potential patient's home. Initially Landrovers were used combined with bicycle circuits. But following the increase in basic costs of the vehicles and also of fuel in the mid-1970s, and in addition the lack of personal contact via the Landrover circuit LEPRA was encouraged to re-think its field organizational structure. This became based on the clinic attendant supervised on a 3:1 basis by the leprosy control assistant, supervised again by the field officer or assistant field officer. The success of the project to date has been due to five features:

1 The encouragement, support and cooperation from the President, Government and people of Malawi.
2 The calibre of staff, both ex-patriate and indigenous.
3 The insistence on advanced planning and supervision at all stages.
4 The on-going training of field and laboratory staff together with follow-ups to ensure that the training is followed and is adequate.
5 The enthusiasm of staff at Headquarters to support and encourage those in the field with sustained expertise available from the Medical Advisory Board.

So far as the control project is concerned, it has been based on parallel working with the Government Health Authorities and this has undoubtedly led to greater efficiency and a lack of frustration, but provides a major problem when the final handover becomes a realistic possibility. In the initial Pilot Area this was not satisfactory and showed that with dapsone monotherapy continuous supervised treatment by an outside agency was required for more than 10 years. With multidrug therapy and more experience LEPRA is now experimenting with handing over districts in which the incidence of leprosy has fallen to less than 20 new cases per annum. Only time will tell whether this is the correct number and how much outside supervision is necessary.

There is little doubt in our minds that leprosy control for those living in the

majority of leprosy-endemic countries will require a considerable input of money, and personnel from the richer countries for many years to come if the disease is ever to be controlled. One of the major problems to be faced is how to justify maintaining adequate supervision and control when the caseload falls dramatically but when there is still an appreciable incidence rate.

Developments from the original pilot project

Following the success of the nationwide coordinated leprosy control project and the financial and other support given by ILEP members and others, consideration was given to the possibility of carrying out extended epidemiological and chemotherapeutic studies in the field in cooperation with the Medical Research Council and WHO. Initial discussions took place towards the end of 1973 but it was not until after a feasibility study was completed successfully in 1979 that the major longitudinal epidemiological research project involving an entire population survey of the Karonga District (more than 100,000) was begun. The main objectives of the study are to determine the risk factors associated with leprosy and transmission of *Mycobacterium leprae*. It will not be before the end of 1989, when the second total population survey started in January 1986 is completed, that data contributing to our better understanding of the disease will become available.

On to the second survey of this project, which has just started, a vaccine trial using a killed *M. leprae* preparation introduced by WHO has now been added, from which it is hoped a more effective vaccine than BCG will result, thus ultimately controlling leprosy by preventing new cases developing.

Conclusions

In 1964 it was a major step in LEPRA's history to undertake a leprosy control project in an area with 10,000 untreated patients. It was not envisaged that such a comparatively modest start should develop into a nationwide control scheme, a major epidemiological study and the first trial in Africa, using a new *M. leprae* vaccine for leprosy. This latter study is of particular interest since it was also in Africa (Uganda) that the first control trial of BCG started in 1972 against leprosy proved effective.

It is hoped that the scientific papers now being written will be of value and interest to those dedicated to the control of leprosy throughout the world. There is no doubt that the effort put in by so many people, be they scientists, administrators, fundraisers or field workers, has been of immense benefit to the people of Malaŵi and it is hoped that through the lessons learned and lessons to be learned from continuing the work in that country, information will become available universally to help in the fight against leprosy.

G F HARRIS
Director, LEPRA

R J W REES
Chairman, Medical Advisory Board, LEPRA