REPORT

WORKSHOP ON MULTIDRUG THERAPY FOR LEPROSY AND SHORT-COURSE CHEMOTHERAPY FOR TUBERCULOSIS IN THE SOUTH PACIFIC

Suva, Fiji
10 March 1989

Manila, Philippines
June 1989
REPORT

WORKSHOP ON MULTIDRUG THERAPY FOR LEPROSY AND SHORT-COURSE CHEMOTHERAPY FOR TUBERCULOSIS IN THE SOUTH PACIFIC

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NOTE

The views expressed in this report are those of the participants in the Workshop on Multidrug Therapy for Leprosy and Short-course Chemotherapy for Tuberculosis in the South Pacific and do not necessarily reflect the policies of the World Health Organization.

This report has been prepared by the Regional Office for the Western Pacific of the World Health Organization for governments of Member States in the Region and for the participants in the Workshop on Multidrug Therapy for Leprosy and Short-course Chemotherapy for Tuberculosis in the South Pacific which was held in Suva, Fiji, from 6 to 10 March 1989.
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1. BACKGROUND

Tuberculosis and leprosy remain as a health problem in many countries in the South Pacific. National programmes for the control of the two diseases have made some progress but have not achieved significant improvement in the epidemiology of the two diseases. Short-course chemotherapy (SCC) for tuberculosis and multidrug therapy (MDT) for leprosy, which were adopted in national control programmes, suffered constraints which have greatly affected their role in reducing the pool of infectious cases in the community. Management deficiencies in the treatment regimens have affected their efficacy and led to treatment failures.

In view of this situation and to maximize the impact of the short-course chemotherapy for tuberculosis and multidrug therapy for leprosy, the workshop was held from 6 to 10 March 1989 in Suva, Fiji.

2. OBJECTIVES

The workshop had the following objectives:

(1) To update epidemiological data on tuberculosis and leprosy in countries in the South Pacific.

(2) To review and identify advantages and constraints of existing short-course chemotherapy for tuberculosis and multidrug therapy for leprosy in the national programmes.

(3) To formulate ways and means to increase the effectiveness of the short-course chemotherapy for tuberculosis and multidrug therapy for leprosy.

(4) To determine what collaboration is needed with WHO and regional intergovernmental and nongovernmental organizations for effective and efficient implementation of SCC and MDT in the national programme and make recommendations accordingly.

(5) To enable participants to prepare a plan of action to implement SCC and MDT based on updated strategy, and recruit and train responsible staff in implementing SCC and MDT.
3. INAUGURATION OF THE WORKSHOP

The workshop was formally inaugurated by the Acting WHO Representative, Suva, on 6 March 1989. He read the opening address in behalf of Dr S.T. Han, Regional Director, WPRO (Annex 1). Words of welcome were given by the representative of the Ministry of Health of Fiji; and a short address was likewise given by a representative of the New Zealand Leprosy Trust Board.

In his address, Dr Han reminded the participants that tuberculosis and leprosy were still a health problem in the South Pacific, and there was a need to accelerate case-finding and treatment activities to diminish the pool of infectious cases. He also pointed out the deficiencies in management of the treatment regimen which resulted in treatment failure. Dr Han reviewed the objectives of the workshop and expressed the hope that the participants would find the solutions to the problems and constraints involved in implementing short-course chemotherapy and multidrug therapy, so that the total control of leprosy and tuberculosis in the South Pacific region could be achieved.

4. METHODOLOGY OF THE WORKSHOP

The agenda prepared for the workshop was adopted by the participants. Country reports on leprosy and tuberculosis control with regimens on MDT and SCC, respectively, were given by the country representatives. The participants discussed these particularly with regard to the strategy and management aspect of the two treatment regimens. Lectures were given by temporary advisers on selected topics which were discussed extensively by the participants as they related to their country situation (Annex 2).

The lectures and country presentations formed the background for the working group as guidelines on SCC and MDT implementation. The participants were divided into two groups. Discussions were also held on the collaboration needed with WHO and nongovernmental organizations for the effective implementation of SCC and MDT.

At the end of the workshop, the group presented the practical guidelines of MDT and SCC implementation and the needed collaboration.
5. SUMMARY OF DISCUSSIONS

First day

Twelve countries sent participants to the short-course chemotherapy and multidrug therapy workshop (Annex 3). These were American Samoa, Belau, Cook Islands, New Caledonia, Fiji, Kiribati, Federated States of Micronesia, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu. The representatives from Marshall Islands and Northern Marianas did not arrive. The New Zealand Leprosy Trust Board was represented by Dr McMahon.

All the reports were on the implementation of the tuberculosis control programme with emphasis on tuberculosis chemotherapy, except for that of New Caledonia, which was on the leprosy control programme. All countries are implementing standard regimen and short-course chemotherapy in their national tuberculosis control programme. The short-course chemotherapy regimen differs in drug combination, duration and frequency of intake, including dosage. All countries have hospitalized the patients in the intensive phase for two to three months. For the continuation phase, domiciliary treatment was used with minimum supervision. However, in American Samoa, even the continuation phase was well supervised since all patients must visit the clinic to get their daily or weekly drug supply. Also, children with positive reaction to the mantoux test were given chemoprophylaxis for 6 to 12 months.

All the tuberculosis programmes were integrated in to general health services except in American Samoa. Kiribati has shown that case-finding and treatment can be done by peripheral health workers. In the majority of countries, the direct sputum microscopy is weak. In Vanuatu, more than 50% of registered cases was under treatment. The sputum has not been examined by direct microscopy. Treatment in the majority of countries was based on clinical examination and history. The drug sensitivity test is practically not available except in American Samoa. Trained Health workers on tuberculosis control and implementation of short-course chemotherapy are not sufficient in number in most countries.

The implementation of short-course chemotherapy is hampered by lack of trained manpower, such as laboratory technicians and personnel, to do monitoring and supervision. In one country, lack of policy seems to slow down the implementation of the national programme. Since drugs are supplied free to patients, supervision of follow-up activities seem to be a major problem in many countries.

After the presentation of country reports, a tabulation of prevalence, incidence and SCC implementation was prepared to show the tuberculosis situation in the South Pacific Countries (Table 1).
Second day

The day started with a lecture on planning short-course chemotherapy to determine the requirements for its successful implementation. A simulation model for setting targets and determining resource requirements, including evaluation, was discussed. The information needed for the model to work as stated must be available. It was pointed out that recording needed to be improved to make data available for planning, and for assessment of patients and of the programme. The importance of management in attaining high compliance and completion rate of patients under treatment was stressed.

The second lecture for the day showed the participants how different drug combinations were arrived at. The different essential anti-tuberculosis drugs were discussed together with the characteristics of their effects on the organism. Also the different durations of chemotherapy regimen were discussed and for what situations they are recommended, as well as the need for follow-up sputum examination during and after treatment. Emphasis was placed on the importance of information on the results after two months of treatment. This can provide clues on the risk of relapse. The results of sputum examination follow-up in the last two months are also important in determining the outcome of treatment. In case of relapse due to dormant M. tuberculosis bacilli, the regimen should be repeated since the bacilli are still sensitive to it.

Also discussed was the definition of defaulter, relapse and re-treatment. Cohort analysis was also demonstrated. It was stressed that a change in regimen would not result in increased effectiveness of chemotherapy. There is a need to improve case-finding, case-holding and efficacy of the drug regimen if the chemotherapy programmes in the national country programme are to have a strong impact.

In the afternoon, group work was done on guidelines for SCC implementation as applicable to most countries in the South Pacific. The group was divided into two sub-groups to work on each subject. To facilitate discussion and exchange of information and experience, an outline for discussion was agreed on.

The following topics were discussed as recommended according to the country situation, its experience and the constraints encountered in the implementation of existing SCC in the formulation of guidelines.

1. Activity/requirement before implementation of SCC
2. Rationale of short-course chemotherapy
3. Target group
4. Approach to implementation
5. Place of treatment
6. Training needs
7. Case-finding and case-holding
8. Bacteriology/laboratory support
9. Recording and reporting
10. Treatment duration
Third day

The third day started with the two working groups completing their discussion and guidelines on the short-course chemotherapy regimen for tuberculosis. Before the noon break, each group made its report, which included the following points that contribute to the successful implementation of SCC:

1. Government must have a policy to implement SCC.
2. A detailed plan of action indicating case load, manpower and resources is needed.
3. Training and reorientation of health staff are needed.
4. Positive acid bacilli tuberculosis cases should be given top priority for the SCC.
5. An active approach should be taken to case-finding by using direct sputum microscopy.
6. Laboratory support is needed, especially for diagnosis and follow-up examination.
7. X-ray examination was suggested as a second tool for diagnosis.
8. Short-course chemotherapy regimens were suggested for countries with high and low prevalence, low and high drug resistance level and good and poor compliance and collection rates.
9. Health education is a means of achieving good case-holding, high compliance and high completion of treatment regimen.
10. An initial two to three months' treatment in hospital is recommended and the rest of the regimen could be on domiciliary basis.
11. Good monitoring and supervision have been emphasized during and after treatment. However, the approach will differ from country to country.
12. Reporting and recording systems should be given proper attention to facilitate monitoring, supervision, and patient and programme evaluation and planning. The relevant information that must be entered was emphasized, such as address, smear results and drug collection.
(13) Approach to implementation will depend on each country's situation. In the absence of adequate manpower, priority should be given to an integrated approach, as most countries in the South Pacific are implementing short-course chemotherapy.

In the afternoon, the MDT country reports were discussed. The reports showed that MDT is used in all countries. The regimen basically follows the WHO recommended MDT except in New Caledonia. It appears that follow-up activities were hampered by the geographical location and accessibility of the patients. The poor transportation system and the line of islands make it difficult to have a good follow-up, monitoring and supervision. American Samoa's MDT implementation is unique in that all cases are diagnosed, treated and followed up in the hospital.

A summary of prevalence, incidence and MDT implementation was prepared to show the leprosy situation in the South Pacific (Tables 2 and 3).

After the country reports, lectures were given on MDT case-finding, the rationale of MDT, the management of MDT, evaluation, surveillance, laboratory support, recording and reporting, and the MDT regimen. Participants raised some issues that were unique to their national programmes, and the group offered some possible solutions.

Fourth day

The lecture and discussion on MDT implementation were completed. After this, an open forum was held regarding some issues raised during the lecture, especially on the drug combination, duration of treatment and completion of treatment.

Group work was done on improving existing MDT implementation in countries and preparing practical guidelines for implementation. The guidelines for discussion were as follows:

(1) Rationale of MDT
(2) Objectives
(3) Target
(4) Approach to implementation
(5) Training
(6) Laboratory support
(7) Supervision
(8) Monitoring
(9) Recording and reporting
(10) Surveillance
(11) Evaluation

During the coffee break, participants were invited to see the gelatin particle agglutination test (GPAT) procedures and results at the Twomey Memorial Hospital laboratory. After group work, each group presented the results of group discussion, and some issues were discussed. The participants agreed to integrate their group work to form practical guidelines for SCC and MDT implementation for South Pacific countries.
Fifth day

The Secretariat presented the integrated results of the group discussions incorporating the different topics discussed. One set was for implementation of MDT in leprosy control, and the other for implementation of SCC in tuberculosis control. Finalized version of the result of group work on MDT and SCC was agreed on by the participants (Annexes 4A and 4B). After the presentation and discussion of the integrated group work, the group discussed the collaboration needed to accelerate programme implementation and maximize the impact of SCC and MDT in their respective control programmes.

6. EVALUATION OF THE WORKSHOP

A tabulation of the answers to the evaluation questionnaires submitted by the participants showed that the workshop was successful. The objectives were achieved, however, as observed by the participants, there were some deficiencies in the administrative and technical aspects which should be attended to in the future workshops (Annexes 5 and 6).

7. CONCLUSION

At the end of the workshop, there was a consensus among the participants on the following points:

(1) National leprosy and tuberculosis control programmes should be strengthened through training of concerned staff on technical and managerial aspects of the programmes. Priority should be given to laboratory technicians, especially in procedures for the tuberculosis control programme, to provide adequate laboratory support for the diagnosis and follow-up of treatment regimens in both control programmes.

(2) A periodic evaluation of the control programme in collaboration with WHO short-term consultants should be conducted.

(3) SCC should be fully implemented for all positive acid fast bacilli tuberculosis cases and MDT should be fully implemented for all leprosy cases (both paucibacillary and multibacillary).

(4) A plan for total control of leprosy in some countries where there are few cases like in Cook Islands, Samoa and Tonga should be formulated and implemented. Discussion with identified countries should be initiated.
(5) All anti-leprosy and anti-tuberculosis drugs should be in blister packs to facilitate distribution, monitoring and supervision of treatment activities.

(6) Practical guidelines for implementing MDT and SCC in national control programmes should be made available.
OPENING REMARKS OF THE REGIONAL DIRECTOR,
WORLD HEALTH ORGANIZATION REGIONAL OFFICE
FOR THE WESTERN PACIFIC, MANILA

Distinguished Participants, Guests, Ladies and Gentlemen,

I am very glad that all of you were able to come to this workshop on multidrug therapy for leprosy and short-course chemotherapy for tuberculosis in the South Pacific. I know you are all very busy with leprosy and tuberculosis control activities in your own countries.

These two diseases still remain a health problem in most countries of the South Pacific. The current tuberculosis and leprosy control programmes have not reached their objectives of cutting the transmission of the diseases and reducing the incidence of tuberculosis so that they cease to be a health problem in the country. Case finding and treatment must shift into high gear if they are going to diminish the pool of infectious cases. I believe there are also hidden tuberculosis and leprosy cases that need to be detected and placed under effective treatment. Furthermore, with scarce resources, the management of the treatment regimen must be improved.

In the early 1980s, the multidrug therapy regimen for leprosy and short-course chemotherapy for tuberculosis were adopted by all countries in the South Pacific Region.

Some countries have successfully implemented the multidrug therapy and short-course chemotherapy regimens but most of them continue to face deficiencies in the management of treatment regimens which result in treatment failure. Problems of this kind have greatly contributed to the slow attainment of the regional and national objectives of cutting transmission and reducing the incidence and prevalence of the diseases.

This workshop was therefore organized so that the years of experience some of you have had can be used to the best advantage in providing short-course chemotherapy for tuberculosis and multidrug therapy for leprosy in your respective countries. The workshop aims (a) to review and identify constraints and their solution in the implementation of the treatment regimens; (b) to formulate guidelines for the implementation of the regimens taking into consideration the country's health infrastructure support and available services, including drugs, in accordance with existing socioeconomic conditions; (c) to determine the need for collaboration with WHO and regional intergovernmental and nongovernmental organizations to accelerate effective and efficient implementation of MDT and SCC; and (d) to reorient new staff responsible for implementation of the regimen in national programmes.
I know that some of you have successfully implemented treatment regimens in your national control programmes, and I hope you will share this experience with the rest of the participants. You have a lot to contribute to the workshop and to the total control of leprosy and tuberculosis in the South Pacific Region.

I wish to thank the Permanent Secretary for Health and the Government for accepting our request to hold this workshop in Fiji. The Government has always gladly agreed to hold WHO intercountry activities, workshops and seminars in Fiji for the benefit of South Pacific countries.

I would also like to thank Dr Farrugia, Dr Daulako and Dr Hong for accepting our invitation to act as resource persons in this workshop. Your contribution to the workshop will enhance the knowledge and skills of participants.

May I request you all to play your part in implementing any measures that will accelerate implementation of effective treatment regimen for tuberculosis and leprosy, and thus contribute to the total control of the two diseases in the South Pacific Region.

Allow me in conclusion to express my best wishes for the successful outcome of the workshop.
**PROGRAMME**

Monday, 6 March

8:00 - 9:00 - Registration
9:00 - 9:15 - Opening ceremony
9:15 - 9:45 - Adoption of agenda

Keynote address on short-course chemotherapy

9:45 - 10:00 - Coffee break
10:00 - 12:00 - Country reports
12:00 - 1:30 - Noon break
1:30 - 3:00 - Country reports
3:00 - 3:15 - Coffee break
3:15 - 5:00 - Synthesis of problems and constraints on short-course chemotherapy

Tuesday, 7 March

8:00 - 9:45 - Lecture

**Dr Qian Yuan Fu**

1) Case finding and case management in SCC
2) Manpower needs in SCC
3) Monitoring and supervision
4) Records and reporting

**Dr Y.P. Hong**

1) Principles of chemotherapy
2) Antituberculosis drugs
3) SCC regimens
4) Evaluation of SCC-Cohort analysis
5) Surveillance during and after treatment

9:45 - 10:00 - Coffee break
10:00 - 12:00 - Discussion of participants
12:00 - 1:30 - Lunch
1:30 - 3:00 - Group work
3:00 - 3:15 - Coffee break
3:15 - 5:00 - Group work
Annex 2

Wednesday, 8 March

8:00 - 9:15 - Presentation of group work
9:15 - 9:30 - Coffee break
9:30 - 12:00 - Country presentation on MDT
12:00 - 1:30 - Lunch
1:30 - 3:00 - Lecture
3:00 - 3:15 - Coffee break
3:15 - 5:00 - Lecture

Dr R. Farrugia

1) Case finding in MDT
2) Rationale of MDT
3) Management of MDT
4) MDT evaluation

Dr E.C. Daulako

1) MDT regimen
2) Surveillance in MDT
3) Laboratory support in MDT
4) Recording and reporting

Thursday, 9 March

8:00 - 9:15 - Group work
9:15 - 9:30 - Coffee break
9:30 - 12:00 - Group work (continuation)
12:00 - 1:30 - Lunch
1:30 - 3:00 - Group work (continuation)
3:00 - 3:15 - Coffee break
3:15 - 5:00 - Group work (continuation)

Friday, 10 March

8:00 - 9:30 - Presentation of guidelines
9:30 - 10:00 - Coffee break
10:00 - 12:00 - Collation of guidelines for MDT and SCC
12:00 - 1:30 - Lunch
1:30 - 2:00 - Closing ceremony
ANNEX 3

AGENDA

1. REGISTRATION
2. OPENING CEREMONY
3. ADOPTION OF THE AGENDA
4. KEYNOTE ADDRESS ON SHORT-COURSE CHEMOTHERAPY
5. COUNTRY REPORTS: SHORT-COURSE CHEMOTHERAPY IN TUBERCULOSIS
6. SYNTHESIS OF PROBLEMS AND CONSTRAINTS ON SHORT-COURSE CHEMOTHERAPY
7. LECTURES
8. DISCUSSION OF PARTICIPANTS
9. GROUP WORK ON THE PREPARATION OF GUIDELINES FOR SHORT-COURSE CHEMOTHERAPY IN NATIONAL TUBERCULOSIS CONTROL PROGRAMME IN THE SOUTH PACIFIC
10. PRESENTATION OF GROUP WORK
11. COUNTRY PRESENTATION ON MULTIDRUG THERAPY IN LEPROSY
12. LECTURES
13. GROUP WORK ON THE PREPARATION OF GUIDELINES FOR MULTIDRUG THERAPY FOR SOUTH PACIFIC COUNTRIES
14. PRESENTATION OF GUIDELINES
15. COLLATION OF GUIDELINES FOR SHORT-COURSE CHEMOTHERAPY AND MULTIDRUG THERAPY
16. CLOSING CEREMONY
Group Work

Preparation of guidelines for Short-Course Chemotherapy (SCC) for the South Pacific Countries

1. Problems and constraints of SCC implementation in South Pacific countries
2. Principles of SCC
3. Case finding in SCC
4. Target groups
5. Antituberculosis drugs
6. Regimen in SCC
7. Monitoring and supervision in SCC
8. Reaction to SCC and treatment
9. Surveillance
10. Evaluation - cohort analysis
11. Recording and reporting
12. Laboratory support to SCC
13. Drug storage and distribution
Group work

Preparation of guidelines for Multidrug Therapy (MDT) for South Pacific Countries

1. Problems and constraints of MDT
2. Rationale of MDT
3. Antileprosy drugs
4. MDT regimens
5. Target groups and classification of cases for MDT
6. Case Management
7. Monitoring and supervision in MDT
8. Reaction and treatment
9. Defaulter
10. Surveillance after treatment
11. Evaluation of MDT implementation
12. Recording and reporting
13. Drug distribution and storage
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PRACTICAL GUIDELINES FOR SHORT-COURSE CHEMOTHERAPY (SCC)
IMPLEMENTATION IN THE NATIONAL TUBERCULOSIS CONTROL PROGRAMME (NTP)

I. Prerequisite for implementation of short-course-chemotherapy in national tuberculosis control programme

1. National tuberculosis control plans - the NTP will spell out the target and strategy in the implementation of case finding and treatment activities.

2. Government policy on tuberculosis chemotherapy - this policy will expedite the selection of strategy and chemotherapy regimen for implementation including estimation of funding requirements.

3. Training of the staff - trained tuberculosis worker will be needed to effectively implement short-course chemotherapy. Health staff must understand the rationale, priority, strategy of the regimen, understand the need for compliance, completion of treatment including the action of each drug in the regimen.

4. Support from superior/supervisor and programme managers.

5. Health education of the public which should be an ongoing activity.

II. Rationale of short-course chemotherapy

1) To render all infectious tuberculosis cases (smear positive or bacteriologically confirmed tuberculosis cases) non-infectious in a short period.

2) To attain high completion of treatment among cases under treatment.

3) To overcome drug resistance (primary or secondary).

Objective:

To reduce pool of infectious cases, reduce incidence and prevalence of tuberculosis in the population.
Annex 7

III. Determine the case load, drug requirement and other resource needed

1) Target for SCC case load -

This is determined by trend of registered cases and expected new cases. This projected prevalence and incidence may be used also to estimate case load.

2) Target setting for SCC -

Target setting will depend on the following:

1. Prevalence and incidence.
2. Compliance and completion rate.
3. Capacity of the existing health organization to do case finding and case holding.
4. Resource available especially drugs and microscopy centres. Bear in mind that increase in resources in some countries is not possible.
5. Constraints and problems such as trained health staff, geography and accessibility of health services to the population.

A. Case finding target

Priority target:

All persons having cough for at least 3-4 weeks, loss of weight and appetite must be given priority in examination of their sputum for acid fast bacilli. Once confirmed, they must be placed under treatment. This may be done in OPD patients or those voluntarily coming to the clinic with above symptoms.

All efforts must be concentrated to detect all bacteriologically tuberculosis cases to be placed under effective chemotherapy. Direct microscopy should be the tool for case finding which is available, cheap and can be done by a trained health staff in the local/peripheral unit. An X-ray exam may be done if available. Tuberculin test has no place in case finding in countries with high prevalence and incidence of tuberculosis and where BCG vaccination was given to all eligible population.
B. Case holding

Targets for treatment:

(1) Priority - all bacteriologically confirmed tuberculosis cases must be placed under effective treatment.

(2) X-ray confirmed tuberculosis cases with/without acid fast bacilli in sputum.

(3) Individual with very classic symptoms and sign of tuberculosis without acid fast bacilli in sputum.

Chemotherapy regimen

The chemotherapy regimen to be adopted should be cost effective.

- short duration of treatment
- ensure good compliance and completion of treatment
- reduce infectiousness of patient in a short time
- tolerable and accepted by patient
- less side effects

3) The short-course chemotherapy

There are several combinations in the short-course chemotherapy regimen which could be adopted in different country situation.

1. Countries with high drug resistance, minimum supervision and irregular intake:

   2HRZ/4H2R2
   4H3R3

2. Countries with low drug resistance and good compliance rate:

   2HRZ/4HR

3. Other regimen:

   2-3 S or EHR/6-7 HR
If facilities are available, a liver function test is indicated before the start of treatment. This will give information on those patient who will need close monitoring and supervision for sign of hepatotoxicity.

Also, if hospital beds are available, patient may be treated as in-patient initially for two months. In this approach, patient could be monitored for adverse reaction, institutionalize in him/her the need for complete treatment and to receive a good information and educate him/her on the disease and the required treatment. Also, a follow-up sputum exam could be done before the discharge. After two months, there is chance that the sputum becomes negative or the quantity of expectorated bacilli is diminishing. This will again be an indication that the regimen is effective and hope to expect a good conversion of the sputum during the six-month treatment duration.

IV. Health Education

Health education plays an essential role in the control of tuberculosis. It should be a two-way communication process which should be a continuous process to motivate both health personnel and the general population. Every health worker is a potential health educator but would require assistance from a trained health educator.

Health education should be given at different levels to different target groups, as follows:

1) Clinic and hospital level - the patient and his/her companion
2) Community - general public
3) Schools - from primary to secondary level as part of health and social programme
4) Teachers
5) Voluntary groups - church groups and civic organizations
6) Village leaders and traditional healers

Note:
- R - Rifampicin
- H - Isoniazid
- Z - Pyrazinamide
- S - Streptomycin
- E - Ethambutol
Annex 7

Don't miss the opportunity to give health education to patients while in the hospital.

Good posters and charts in clinic wall will be a good approach to let the public know of the disease - how do they get the disease, treatment, etc.

V. Logistics

Before implementation of short course chemotherapy, logistic system must have been previously set. Drugs should be available in time, distribution centre decentralized and available for follow up, supervision, monitoring and evaluation.

VI. Reporting

A network of reporting must be established. Reports from village clinic must be submitted to the district health hospital/centre. This includes the copy of clinic record. At that level, it is consolidated and submitted to the provincial health office.

VII. Recording

Simple record forms must be available. It should serve as a permanent record of each patient. This could be used for requesting drugs, follow-up, identification of defaulter and those who should need close follow-up (simple form is attached).

VIII. Evaluation

Evaluation must be built in the plan. A regular evaluation process should be conducted yearly. A periodic evaluation may be conducted as necessary.

For operational evaluation, the use of indicators is recommended, such as:

1. Per cent of symptomatics covered
2. Per cent of symptomatics with smear positive results
3. Per cent of registered cases under SCC and standard treatment
4. Conversion rate
5. Relapse rate
6. Treatment failure
7. Drop-out rate
8. Target for case finding vis-a-vis case detection
Annex 7

Epidemiological indicators:

1) Incidence rate -
   age, sex, etc.

2) Prevalence rate

3) Incidence of smear positive
PRACTICAL GUIDELINES FOR MULTIDRUG THERAPY (MDT)
IMPLEMENTATION IN THE NATIONAL LEPROSY CONTROL PROGRAMME (NLCP)

I. Requirements for implementation of MDT in national leprosy control programme

1. National leprosy control plan - the plan will state the objectives, approach and target including present activities. This will influence the delivery of MDT regimen to the patient.

2. Government policy on the programme of chemotherapy - the Ministry of Health will have to specify if they have adopted the MDT. If not, then the policy should be formulated. Otherwise, if no policy is stated, implementation will have a hard time to effectively implement the MDT.

3. Infrastructure support
   a) Trained staff is a must to the successful implementation of MDT especially at the delivery level. The trained staff must be able to explain to the patient the need for treatment, completion of treatment and identify adverse reaction.
   b) Laboratory facilities is necessary to support case finding, case classification, follow-up and supervision of cases.
   c) Information on leprosy situation and performance of the programme. This is needed in the planning of the MDT implementation to estimate case load and capacity of the programme to absorb the needed activities.

II. Rationale of MDT regimen

1. To render non-infectious all leprosy cases - reduce pool of infectious cases.

2. To reduce duration of treatment - monodapsone therapy requires a lifetime, but MDT has limited terms of treatment.

3. To overcome drug resistance. The drug combination will take care of any drug resistance.
Annex 8

III. Objective

To reduce pool of infectious cases within a short period of time, thus reduce incidence and prevalence of the disease.

IV. Target groups for MDT

1. Multibacillary cases - priority should be given to all multibacillary leprosy cases.
   (a) newly detected
   (b) old cases (those who started or completed Dapsone monotherapy)
   (c) relapse

2. Paucibacillary
   (a) newly detected cases
   (b) old case on Dapsone monotherapy

V. Approach to MDT implementation

It should integrate with existing general health services through primary health care. There is a need for community participation in the delivery of leprosy services, and existing health facility and personnel must be able to deliver the services at any given time.

VI. Regimen

WHO recommended requirement for multibacillary and paucibacillary cases

MB regimen
- Rifampicin - 600 mg
- Clofazimine - 300 mg monthly
- Clofazimine - 50 mg
- Dapsone - 100 mg daily

PB regimen
- Rifampicin - 600 mg (monthly)
- Dapsone - 100 mg (daily)
Annex 8

VII. Duration of treatment

At least two-year period for MB and 6 months for PB subject to morphological index and regression of skin diseases and non-appearance of skin lesion or nerve damage.

VIII. Regularity of treatment

A patient on MDT can be considered as regular provided he/she has received 2/3 of the recommended supervised doses at any given time. If patient missed more than half of the doses, it is suggested to restart the treatment regimen.

IX. Extension of treatment

1. Relapse cases (bacteriological)
2. When lesions flare up and new lesions appear
3. When original nerve damage is extended

X. Training

All categories of health workers should be trained in case-detection, implementation of MDT, identification and treatment of adverse reaction, monitoring, supervision and surveillance. Special training on laboratory procedure on leprosy control services to make support laboratory more efficient and effective in the diagnosis, classification for treatment and follow-up activities. Leprosy and MDT treatment should be included in the curriculum for medical and allied medical students (both graduate and undergraduate).

XI. Health education

Health education is a precondition to success in the implementation of MDT. Health education must be a continuing activity to the patient, family, community leaders and community at large. It is best given by health personnel to patients in hospitals and clinics during inpatient period and during follow-up home visit.

XII. Laboratory support

MDT implementation requires a better laboratory support for classification of diseases; treatment require and follow up during and after treatment. Trained laboratory technicians should be able to do smear examination and take biopsy for referral. Laboratory facilities should be upgraded to meet the MDT requirement.
Annex 8

XIII. Monitoring and Surveillance

**MB cases** - Once a year dermal and bacteriological examination during treatment period, and post-treatment once a year for 5 years.

**PB cases** - Clinical and bacteriological examination for a one-year period and follow-up treatment for at least 2 years; once a year chemical examination.

**Clinical contacts** - Physical examination should be done once a year for contacts of MB patients for at least 5 years or more.

Contacts of paucibacillary cases should be physically examined once a year for at least two years.

XIV. Recording and Reporting

Simplified format for recording should be used. (See on WHO recommended forms.) A central registry must be set up in every country. Information on registry is updated through monthly reports from peripheral health units. Relevant information on the case must be included in the forms used. It should be used in monitoring patient and MDT treatment and for programme evaluation.

XV. Feedback

A system of feedback must be established to inform peripheral units of leprosy situation in respective place and the action needed, when necessary.

XVI. Evaluation

Evaluation must be built in the plan of action. Periodic evaluation of the MDT implementation is recommended and programme evaluation should be done annually.

For operational evaluation of MDT, the use of the following indicators:

1. coverage of MDT (MB & PB)
2. regularity of treatment (MB & PB)
3. relapse rate among those under MDT
4. surveillance rate (clinical and bacteriological examinations)
5. implementation rate target for case-finding vis-a-vis case detected
6. dropout rate
Epidemiological indicators

(1) incidence rate (age, sex, forms, MB/PB)
(2) prevalence rate
SUMMARY OF EVALUATION ON THE WORKSHOP ON
MULTIDRUG THERAPY FOR LEPROSY AND
SHORT-COURSE CHEMOTHERAPY FOR TUBERCULOSIS
IN THE SOUTH PACIFIC
6-10 March 1989

An evaluation questionnaire was distributed to each of the 13 participants of the workshop. All 13 respondents completed the questionnaire and information furnished was used to assess the results and conduct of the workshop.

The responses to the queries on the achievement of workshop objectives, administrative and technical aspects of the workshop, are tabulated in Annex 1. In the questionnaire, two alternatives were provided for each query: "Yes" for the first column, and the second, "No". A column for "No Reply" was added in Annex 1.

The responses for the achievement of workshop objectives (which include the objectives of the workshop, as well as the skills and concepts learned) were tabulated as follows:

<table>
<thead>
<tr>
<th>Achievement of workshop objectives</th>
<th>Yes</th>
<th>No</th>
<th>Reply</th>
</tr>
</thead>
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<td>-</td>
</tr>
<tr>
<td>Skills or concepts learned</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Application of skills or concepts</td>
<td>100.0%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The objectives of the workshop were:

1. to review and identify advantages and constraints of the existing short-course chemotherapy (SCC) regimen for tuberculosis and multidrug therapy for leprosy (MDT) in the national control programmes;

2. to formulate ways and means to increase the effectiveness of SCC on tuberculosis and MDT;

3. to update epidemiological data on tuberculosis and leprosy in the South Pacific; and

4. to enable participants to prepare a plan of action to:
   - implement SCC/MDT based on updated strategies
   - reorient and train responsible staff in implementing SCC and MDT.

The above mentioned objectives were fully met according to 100.0% of the replies.
Annex 9

Replies to questions relating to the process and outcome or the technical aspects (interaction among the participants, documentation, presentation of topics and discussions, etc.) were as follows: 75.2% of the respondents replied favorably, 11.9% gave negative replies, and 12.8% did not reply.

With regard to the organization of the workshop, 76.9% of the respondents replied that the duration and scheduling of different activities/lectures, group discussions, etc., are satisfactory, while 23.1% did not agree.

Nine respondents or 69.2% of the replies rated the administrative aspects (which include organization arrangements for travel, accommodation, per diem, meeting room, secretarial support and interpretation) as satisfactory. There were no field visits as part of the workshop, but according to 61.5% of the participants field visits would have been useful to meet the objectives of the workshop.

The unfavourable replies on the technical aspects were distributed as follows:

<table>
<thead>
<tr>
<th>Unsatisfactory_technical_aspect</th>
<th>Replies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Participants</td>
<td></td>
</tr>
<tr>
<td>- were not able to express ideas or problems at the meeting</td>
<td>1 or 7.7%</td>
</tr>
<tr>
<td>- not enough opportunity to exchange knowledge and experience</td>
<td>1 or 7.7%</td>
</tr>
<tr>
<td>- not fully satisfied with discussions at the group sessions</td>
<td>2 or 15.4%</td>
</tr>
<tr>
<td>2. Documentation</td>
<td></td>
</tr>
<tr>
<td>- Not enough time to study working papers</td>
<td>7 or 53.6%</td>
</tr>
<tr>
<td>3. Methods of introduction and presentation were not satisfactory</td>
<td>2 or 15.4%</td>
</tr>
</tbody>
</table>

In summary, the components of the administrative aspects were rated as satisfactory by 69.2%. The components of the technical aspects were rated as satisfactory (Yes) as follows: workshop objectives by 100.0%, process and outcome (participants and documentation) by 75.2%.

It can, therefore, be said that the Workshop on Multidrug Therapy for Leprosy and Short-Course Chemotherapy for Tuberculosis in the South Pacific was successful. However, the deficiencies listed by the participants on both the administrative and technical aspects should be taken into account in planning future workshops of this nature.
### RESULTS OF EVALUATION QUESTIONNAIRES

*Workshop on Multidrug Therapy for Leprosy and Short-Course Chemotherapy for Tuberculosis in the South Pacific  6-10 March 1989*

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</table>

*No. of questionnaire replies received = 13*
Annex 10

2.8.2 If there were no field visits, do you consider field visits would have been useful to meet the meeting objectives?

3. Organization of the meeting
Were the duration and scheduling of different activities - lectures, group discussions etc. - satisfactory?

4. Administrative aspects
Are organization or administrative arrangements for travel, accommodations, per diem, meeting room, secretarial support and interpretation satisfactory?

5. Your overall conclusion
Do you feel that -
(a) The recommendations/conclusions reflected the meeting consensus?
(b) Such meetings should be held regularly?
(c) Your attendance was worthwhile to you personally?
(d) Your participation was worthwhile to your country?

6. Is there any better way to achieve the meeting objectives?

7. What follow-up activities, if any, would you recommend?
(a) by national government
(b) by WHO
(c) by other agencies (specify type)

8. How many meetings - WHO and others - have you attended in your professional capacity outside your country over the last twelve months?

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Source:
Country reports submitted during the workshop.
WHO Socio-Economic Indicators, September 1988.
TABLE 2
PREVALENCE AND INCIDENCE OF LEPROSY
IN THE SOUTH PACIFIC COUNTRIES
1981-1988

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Registered Cases</th>
<th>Prevalence Rate per 1000 Population</th>
<th>MB</th>
<th>PB</th>
<th>1988 New Cases</th>
<th>Incidence Rate per 1000 Population</th>
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Source:
Country reports of participants
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MDT IMPLEMENTATION IN SOME COUNTRIES AND AREAS
IN THE SOUTH PACIFIC
1981-1988

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Source:
Country reports and questionnaires during workshop.