The Final Push Strategy to Eliminate Leprosy as a Public Health Problem

Questions and Answers

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CONTENTS

FOREWORD **8**

STRATEGIC ISSUES – THE ELIMINATION OF LEPROSY AS A PUBLIC HEALTH PROBLEM **9**

1. Why is the elimination of leprosy as a public health problem feasible? 9
2. What does eliminating leprosy as a public health problem mean? 9
3. What has been the impact of the elimination strategy? 9
4. What are the main problems facing the elimination effort? 10
5. Does the high rate of new case detection indicate a failure of the elimination strategy? 10
6. Why has the prevalence rate been selected as the yardstick for elimination? 11
7. Why not aim for the eradication of leprosy rather than elimination? 12
8. What is the difference between leprosy control and leprosy elimination? 12

GLOBAL ALLIANCE FOR ELIMINATION OF LEPROSY AND THE FINAL PUSH STRATEGY **12**

9. Why was the Global Alliance created and the "Final Push" to Eliminate Leprosy launched? 12
10. What are the key elements of the Final Push strategy? 13
11. What has been achieved at country level since the creation of the Global Alliance? 13
12. What possible problems could arise in the future that might prevent the goal of elimination being attained in the remaining highly endemic countries? 14
13. Is support for leprosy diminishing because of the success of the elimination effort? 14
14. Will new cases of leprosy continue to occur beyond the year 2005? If so, how can they be explained? 15

INTEGRATION WITHIN THE GENERAL HEALTH SERVICES **15**

15. Why is it crucial to integrate leprosy within the general health services? 15
16. What are the basic requirements for integration in the field? 15
17. What is meant by easy access to MDT services and why is it important? 16
18. What type of training should be provided to general health workers? 16
19. How can MDT be provided in a patient-friendly and flexible manner? 17
20. What is Accompanied MDT (A-MDT) and why was it introduced? 17

COMMUNICATIONS STRATEGY **18**

21. Why do we need to change the image of leprosy? 18
22. What are the most important messages about leprosy for the community? 18
23. What are the key channels for an effective communications campaign? 19
24. When should the communications campaign be launched? 19
25. Why should communities be actively involved in leprosy elimination efforts? 20

SPECIAL CAMPAIGNS TO ELIMINATE LEPROSY **20**

26. What are Special Campaigns? 20
27. What activities are carried out during the actual campaign? 20
28. Where are Special Campaigns particularly needed? What population groups

should be targeted? 21
29. Why not simply conduct house-to-house surveys to detect all cases? Why wait for people with possible symptoms to self-report? 21
30. What are the main challenges encountered when conducting a Special Campaign? 21
31. How will the Special Campaigns be evaluated? 22

TECHNICAL ISSUES **22**
Multidrug therapy (MDT) **22**
32. What was the guiding principle in the development of MDT? 22
33. What are the recommended standard treatment regimens for leprosy? 23
34. What is the evidence that MDT is effective in MB and PB leprosy? 23
35. Is there any evidence that the drugs included in MDT can antagonize each other's antibacterial activity? 24
36. Does MDT help in reducing the frequency and severity of lepra reactions? 24
37. Why is rifampicin given only once a month? 24
38. Why is clofazimine given once a month in addition to the daily dose? 24
39. Can MDT prevent the development of resistance of *M. leprae* to antileprosy drugs? 24
40. Can MDT eliminate persisting *M. leprae*? 25
41. Is MDT contraindicated in patients suffering from tuberculosis? 25
42. Is MDT contraindicated in patients suffering from human immunodeficiency virus (HIV) infection? 25
43. Is MDT safe during pregnancy and lactation? 25
44. How long does it take for skin discoloration caused by clofazimine to disappear? 25
45. Why is MDT considered to be one of the most effective and cost-effective interventions in public health? 26

Alternative antileprosy drugs **26**
46. Are there other antileprosy drugs besides those used in MDT? 26
47. What treatment can be given to patients who do not tolerate MDT due to adverse reactions or contraindications? 26

Discontinuation of skin smears for diagnosis **27**
48. Why have skin smear examinations been discontinued? 27

Shorter duration of MDT treatment for MB patients **28**
49. Why was the duration of MDT for MB patients shortened to 12 months? 28
50. Is any problem foreseen in using the 13-month MDT regimen to treat MB patients with a high bacteriological index? 28
51. Will shortening the duration of MDT treatment for MB leprosy increase the risk of *M. leprae* developing resistance to rifampicin? 28

Vaccines/Chemoprophylaxis **29**
52. Is there an effective vaccine against leprosy? 29
53. Are there any drugs that provide protection against leprosy? 29

OPERATIONAL ISSUES **29**
Compliance/Defaulters **29**
54. Is it important that six doses of PB-MDT are taken within 9 months and 12 doses of MB-MDT are taken in 18 months? 29

55. What should be done if a patient does not take treatment regularly? 29
56. What is a defaulter? What should be done if a defaulter comes back for treatment? 30

Relapse vs reactions **30**
57. After patients have stopped treatment, how is relapse recognized? How can relapse be distinguished from the various types of reactions? 30
58. Should individuals previously cured with dapsone monotherapy be re-treated with MDT? 30

Management of reactions **31**
59. How should lepra reactions be managed? 31
60. How should severe ENL reactions be managed? 31
61. Can WHO assist programmes to procure thalidomide for treating patients with lepra reaction? 33
62. What is WHO's position on the use of Prednipacs™ for management of lepra reactions in the field? 33

Registers **34**
63. Why is it important to keep treatment registers up to date? 34
64. When should patients be considered as cured and removed from treatment registers? 34
65. Is active surveillance of patients after completion of treatment essential? 34

Good practice **34**
66. What are considered to be good practices in the context of leprosy management? 34

ROLE OF WHO **35**
67. What is the role of WHO in ensuring progress towards elimination? 35
68. Can any country request free supplies of MDT through WHO? 35
69. What is WHO's role in preventing/caring for leprosy/related disabilities? 35

TERMS FREQUENTLY USED IN LEPROSY PROGRAMMES **36**

FOREWORD

For centuries, often with the best possible intentions for their welfare as well as that of the wider community, leprosy patients were turned out of their homes and isolated in "leprosaria". Children were often forcibly separated from their parents for long periods of time. Today, throughout the world, all persons diagnosed with leprosy can be treated and cured while leading a completely normal life. Now the challenge is one of logistics and infrastructure, of determination and dedication, of joining hands and not letting go until the goal of ensuring that no further lives are devastated by this disease is achieved.

The major thrust of our efforts must focus on integrating leprosy into the general health services. Health workers at all levels must be taught the simple methods required to diagnose leprosy, and multidrug therapy (MDT) must be made available in all primary health centres to enable patients to be treated as close as possible to their homes. While we are striving to make treatment readily available, a simultaneous priority must be to create a positive environment in which leprosy is seen in the same light as any other curable disease. Our role is to help decision-makers, health providers and communities to understand that the challenge of eliminating leprosy from their homes, schools and villages is no longer insurmountable. We must provide them with simple information clearly communicating the message that there is no need to be afraid of leprosy, that it can be cured, and that the treatment is available free. All the techniques at our disposal must be deployed to make communities demand their right to live in a world without leprosy.

The decisive factor in this final push towards leprosy elimination, however, is the human element. We need people who show initiative and who are not afraid to come forward with new ideas; individuals who wish to be active partners in this global effort and who want safer and happier lives for themselves and their families. I sincerely hope that this booklet will help towards a better understanding of the strategy and the MDT technology behind it, and will contribute to the final push in eliminating leprosy. We look forward to receiving your comments and suggestions for improvement.

Dr David Heymann
Executive Director
Communicable Diseases
WHO, Geneva, 2003

STRATEGIC ISSUES – THE ELIMINATION OF LEPROSY AS A PUBLIC HEALTH PROBLEM

1. Why is the elimination of leprosy as a public health problem feasible?

Leprosy is one of the few infectious diseases to meet the strict criteria for elimination:

- There is only one source of infection: untreated, infected human beings.
- Practical and simple diagnostic tools are available: leprosy can be diagnosed on clinical signs alone.
- The availability of an effective intervention to interrupt its transmission: multidrug therapy (MDT).
- Under natural conditions, "incident' cases" (new cases in which the disease has recently developed) make up only a small fraction of the prevalence pool. Below a certain level of prevalence, any resurgence of the disease is very unlikely.
- Unlike tuberculosis, the leprosy situation does not appear to be adversely affected by HIV infection.

2. What does eliminating leprosy as a public health problem mean?

In 1991, the World Health Assembly passed a resolution to eliminate leprosy as a public health problem by the year 2000. Elimination was defined as a prevalence rate of less than 1 case per 10 000 inhabitants. Although this was achieved at the global level by the end of 2000, extra efforts are still needed to achieve the goal at the national level in some countries.

The elimination strategy is based on detecting and treating all cases with MDT and thereby reducing the disease burden to a very low level. At this low level, the transmission of *Mycobacterium leprae* is likely to be reduced to such an extent that the occurrence of new cases in the community would gradually decrease. The key will be to ensure that all new cases continue to have access to MDT services.

3. What has been the impact of the elimination strategy?

The leprosy elimination strategy enabled the mobilization of significant resources and political commitment. This resulted in the large-scale implementation of MDT, which has brought many backlog and new cases of leprosy under treatment, thus reducing the pool of infection within communities. More than 12 million patients have been detected and cured with MDT. In addition, some 4 million people have been protected from developing deformities. This tremendous impact alone is sufficient justification for the elimination programme.

Over the past 18 years, the global prevalence has been reduced by 90% globally. By the end of 2000, leprosy had been eliminated as a public health problem on a global level. Now, early in 2003, 110 countries have reached the elimination target at the national level and leprosy remains a public health problem in only 12 countries.

The leprosy burden is now concentrated in the five most endemic countries (Brazil, India, Madagascar, Mozambique, and Nepal), which account for 83% of prevalence and 88% of detection worldwide. The combined prevalence rate in these countries is about 4 per 10 000 inhabitants.

Every year, about 600 000 new cases are detected as the coverage of leprosy services increases and the public are better informed about the cure and its availability free of charge at local health facilities.

4. What are the main problems facing the elimination effort?

The main problems involved in implementing the elimination strategy are operational in nature rather than technical.

A core element of the elimination strategy is to make MDT drugs available free of charge to all leprosy patients. However, the implementation of the strategy needs to be adapted to the field reality, particularly in areas that have not been covered so far. These areas generally have weaker health care infrastructures and are difficult to access from all perspectives – geographically, socially, economically, and culturally.

The fact that leprosy diagnosis and treatment remain highly centralized activities, often conducted only by specialized staff, is a major operational problem. In addition, the guidelines followed in some countries are very rigid and complex, with the result that patients in these countries have poor access to MDT drugs. This in part explains the substantial hidden caseload that still remains and serves as a reservoir of infection, spreading the disease in communities. Other reasons are poor geographical coverage of MDT services, limited community awareness about the availability of free and effective treatment, and prejudice – all of which often have tragic consequences such as late diagnosis, high disability rates, and low cure rates. Intense fear of leprosy still persists, leading to stigmatization of affected individuals and their families.

A simplified approach to diagnosis and treatment is needed, using the general health worker at the village level and making services "patient-friendly" and uncomplicated, so that patients are able to complete the course of treatment with minimum disruption to their daily lives.

5. Does the high rate of new case detection indicate a failure of the elimination strategy?

An integral element of the elimination strategy is the expansion of geographical coverage of leprosy services by integrating them into the general health services as well as by conducting Leprosy Elimination Campaigns. In the short term, an increase in "new" cases is not only inevitable but also desirable, as large numbers of previously undetected cases are now coming forward for diagnosis and treatment. Experience clearly indicates that most of the newly detected cases have in fact been suffering from leprosy for many years. Only a small percentage are true "incident" cases, i.e. with disease onset within the past year.

A lack of appropriate tools makes it impossible to measure the true incidence of leprosy,

which would be the best indicator for monitoring the impact of elimination efforts on leprosy transmission in the community. The next best indicator – new case detection rates – has severe limitations as it is directly related to the level of operational activities and thus not a reliable indicator for transmission.

From an epidemiological standpoint, an increase in new case detection is compatible with progress towards elimination. A number of countries have demonstrated that a significant decline in the annual new case detection rates can be achieved after wide-scale application of MDT for several years. The paradoxical trends with relatively stable detection rates reported in some major endemic countries (notably India, which contributes 78% of the global annual case detection) could be the result of several operational and administrative shortcomings, rather than epidemiological factors.

6. Why has the prevalence rate been selected as the yardstick for elimination?

Prevalence at the end of the year is a simple and easily understandable indicator, which gives the balance of the disease burden after counting how many new cases were detected and cured during the year.

The main thrust of the strategy to eliminate leprosy as a public health problem is to reduce the burden of the disease to very low levels. Today, as MDT services are expanding to reach previously uncovered or poorly covered areas, most of the new cases detected each year are those who acquired the disease several years earlier but who remained undetected for various reasons. The true "new" or "incident" cases, who developed the disease only within the past year, constitute only a very small proportion of the total cases detected. The long incubation period and the lack of tools to study transmission levels in the community make it impossible to measure incidence on a standard basis and use it as a yardstick for monitoring.

WHO is fully aware of the limitations of using registered prevalence as an indicator of progress towards elimination. However, in the absence of practicable alternatives, prevalence is probably the best indicator available. Moreover, WHO has made specific recommendations for improving the accuracy and validity of prevalence as an indicator. For example, WHO recommends periodic “updating” of leprosy registers: retaining cured patients on a register results in overestimates of the leprosy burden in the area. On the other hand, the disease burden is underestimated in areas where leprosy services are unavailable locally and people are therefore not encouraged to seek treatment.