Informal Consultation on Innovative Approaches to further Reduce Leprosy Burden in Countries

WHO SEARO, New Delhi, India, 17–18 September 2008

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Contents

1. Introduction

The consultation was opened by Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia Region. In his address, the Regional Director emphasized the need to enhance the global strategy to ensure further reduction of the leprosy burden and to make the leprosy control programme more strategic and innovative in addressing the remaining and emerging challenges. At the same time, keeping in mind that leprosy is a disease associated with poverty, socio-economic determinants of the disease along with stigma and discrimination were important factors to be looked into in developing an effective strategy. He stressed that the leprosy control programme must maintain the gains of the past efforts and continue to work in reducing transmission, a strategic task towards a leprosy-free world, by carrying out research in the areas of primary prevention.

Dr Samlee cautioned that a sense of complacency may develop and therefore, there was a need to remind governments that there was much to be done that would need resources and renewed political and professional commitment. It was expected that the consultation would recommend more strategic and innovative approaches to help leprosy control programmes in addressing the emerging challenges as a result of integration and relatively reduced endemicity in all endemic nations.

The consultation was chaired by Dr S.K. Noordeen with Dr H.J.S. Kawuma as the co-chair-person. The rapporteurs were Dr A. Cunanan and Dr Myo Thet Htoon. Twelve participants from various regions representing diverse expertise attended the meeting. Prof Ji Baohong and Dr Yo Yuasa who were unable to attend sent their contributions and comments on the topics listed in the agenda for discussion and reference.

Dr V. Pannikar, Team Leader Global Leprosy Programme, thanked the participants and referred to the introduction that was given by the Regional Director in which challenges relating to prevention of disabilities (POD) and rehabilitation, social-economic aspects, human rights issues, information, education and communication (IEC) were highlighted as being important for leprosy control. These issues were not addressed in the agenda as it was felt that another group of experts will have to be consulted to obtain additional in-puts to be taken-up and incorporated into the enhanced global strategy to be developed for the period 2011-2015.

2. Objectives

Dr Pannikar explained the objectives of the meeting which is to develop innovative approaches that will focus on the following three specific areas namely:

2.1 Technical

(a) Improve current chemotherapy

(b) Epidemiological monitoring methods and tools

(c) Reliable procedures for accurate diagnosis

2.2 Operational

(a) Effective capacity building

(b) Supervisory support to general health services (GHS)

(c) Efficient logistical support system

2.3 Strategic

(a) Optimal integration

(b) Quality of clinical services

(c) Reliability of monitoring and reporting

3. Current global leprosy situation

Dr Myo Thet Htoon, from the Global Leprosy Programme presented the current global situation in leprosy. The leprosy situation by WHO Regions during 2007 (excluding Europe) showed that a total of 257,777 new cases were detected. A total of 120 out of 150 countries and territories submitted their reports to WHO at the beginning of 2008. It should be noted that though the number of countries reporting to WHO varies from year to year almost all of the major leprosy endemic countries have reported regularly.

The WHO South-East Asia Region registered the highest number of new cases detected during 2007. The number of new cases detected in each of the WHO Regions from 2003 to 2006 showed a significant decrease from year to year and especially between 2004 and 2005 when the decline was about 27%. However, there was only a slight decrease of about 3% between 2006 and 2007. In the analysis excluding the South-East Asia Region (which detected the maximum number of new cases) the annual detection decreased by about 11% between 2004 and 2005 and between 2006 and 2007 it decreased by about 6%.

Information on 18 countries (Angola, Bangladesh, Brazil, China, DR Congo, Cote d'Ivoire, Ethiopia, India, Indonesia, Madagascar, Mozambique, Myanmar, Nepal, Nigeria, Philippines, Sri Lanka, Sudan and Tanzania) reporting 1000 and more new cases shows that these countries contribute 94% of the global new cases detected in 2007. It also highlighted the fact that not all countries are showing a declining trend. In fact, between

2006 and 2007 in 10 countries (Angola, China, DR Congo, Cote d'Ivoire, Ethiopia, Indonesia, Madagascar, Nepal, Nigeria and Sri Lanka) the detection has increased. The dramatic increase observed in Sudan is due to the combination data from Southern Sudan. The rate of decline in some countries such as India, Myanmar and Philippines is slowing or stabilizing. India, which reports the highest number of new cases annually, showed only a 1% decline between 2006 and 2007. It is likely that a stabilizing trend may be predicted in the following years.

The profile of new cases detected in 2007 in different WHO Regions in terms of proportion of multibacillary cases (MB), female, children and those with grade-2 disabilities also showed marked variations within the Regions.

The participants stressed the need to collect data especially in large countries at the sub-national level focusing on new case detection. Interpreting data on new cases will have to take into account current programme coverage, operational factors such as under- and over-diagnosis and whether active cases-finding is carried out in the area or not. The current set of indicators (new case detection by age, sex, type and grade-2 disabilities, relapse, paucibacillary (PB) and multibacillary (MB) cure/completion rates) on which data are collected by WHO annually should not be increased as it would put a strain on the multifunctional staff in the integrated set-up which could further affect the quality of data. In case additional information is needed to review the epidemiological situation within the country, other sources of data apart from the routine data should be looked into and, if needed, field studies should be undertaken to collect the necessary information.

It was pointed out that the data presented showed much variation in new case detection, making it difficult to make reasonable projections regarding trends, especially at the country level. Therefore, caution is needed in setting targets for formulating new strategies and innovations.

National programmes are encouraged to review their data regularly to ensure that the reported data are complete, reliable and valid. It was agreed that in analysing trends for new case detection by MB, children and grade-2 disabilities or when making comparisons between areas, absolute numbers and rates per 100 000 population be considered rather than proportions.

Possible use of data based on sentinel surveillance and sample surveys needs to be explored. In addition, research was needed including simulation modelling to develop ways to validate the reported low endemicity status in a community and also to collect information on surrogate indicators to measure disease transmission such as delay in detection, grade-2 disabilities among new cases and smear positive among new cases with the aim to help national programmes in policy formulation and in mobilizing resources.

4. Current global challenges in leprosy

Dr H.J.S. Kawuma presented global challenges in leprosy according to three areas outlined in the objectives, namely: technical, operational and strategic issues recognizing that some of them would be crosscutting. The aim of the presentation was to stimulate discussion on specific challenges for which innovative and focussed solutions could be proposed in the course of the consultation.

The technical challenges centred on: improved chemotherapy, and epidemiological monitoring. The operational issues included dealing with high burden "pockets", training, supervision, logistics management and low treatment completion rates. The discussion on strategic issues centred on advocacy, integration, support for clinical services, targets and the time –frame for the next strategic plan. The participants agreed that the long list of challenges presented would need to be prioritized and that the operational issues would have to be considered mostly at country level as most of the issues are very country-specific. It was also agreed that attention should be paid to the things that "do happen" in order to take lessons from the factors underlying the achievements or successes.

The maldistribution of resources at country level and within regions/areas in each country in relation to leprosy activities needs to be reviewed. The pros and cons of setting operational targets have to be carefully considered. When targets are set the level to which they should be assigned will depend on the country situation and on the magnitude of the disease.

As leprosy is now becoming a relatively rare disease the question of whether leprosy can still be considered a priority for decision makers was raised. However, it was agreed that efforts should be made to explain the often wrong interpretation made of the "elimination of leprosy as a public health problem" and to highlight the importance of continued political commitment and support along with provision of resources for leprosy activities in each country. It is crucial to maintain the current leprosy control activities to ensure that new cases are detected early and treated properly. As the burden of the disease varies from region to region and within each country it is important to stratify and focus on certain key areas and spell out clearly in the work-plan what should be achieved.

5. Opportunities for better chemotherapy

Dr V. Pannikar presented the need and opportunities for better chemotherapy. The current treatment of leprosy based on WHO's recommended multidrug therapy (MDT) for MB and PB leprosy is unlikely to see major changes during the next 10 years or so. However, the longer term role of MDT will be dependent on *M.leprae* remaining sensitive to the component drugs particularly rifampicin. The emergence of rifampicin resistance, which may completely reverse the hard-fought achievement of the current leprosy control efforts, requires systematic surveillance as there are sporadic reports of such occurrences from several parts of the world.

Dr Pannikar informed that currently there were antimycobacterial drugs such as ofloxacin (a fluroquinolone), minocycline (a tetracycline) and clarithromycin (a macrolide), that have shown moderate bactericidal activity against *M. leprae* in clinical trials. These drugs may be used in non-clofazimine containing regimens; however, their efficacy in non-rifampicin containing regimens is likely to be inadequate for treatment of MB leprosy. Among newer drugs, rifapentine, moxifloxacin, linezoid and R207910 (a diarylquinoline) show promise when tested for bactericidal activity in mice and/or humans. The most promising is moxifloxacin (a fluroquinolone) which shows bactericidal activity at par with rifampcin and may be used to develop non-rifampicin containing regimens to treat patients infected with rifampicin–resistant *M. leprae* strains.

To develop a suitable regimen to successfully treat patients who cannot benefit from rifampicin, due to resistance or other contraindications, it is necessary to test new combinations in field trials with long-term follow-up to ascertain their efficacy to prevent relapses as the outcome indicator. Such studies are difficult to organize, are expensive and will take about 10-15 years to complete. Dr Pannikar concluded that if we perceive this as the need and opportunity to protect current achievements and the future of leprosy control, then we must embark on developing a safe and effective alternative regimen now or it will be too late.

The participants discussed the need to look into the future and carry out research in order to prepare for the challenges that the control programmes are likely to encounter in the future. Regimens that are simple and have shorter treatment duration and regimens that can replace the current standard MDT should drug resistance become a problem are needed for future use. Considering the long duration inherent in conducting a chemotherapeutic study in the field careful planning and commitment from various partners will be essential.

The experience of researchers in developing new TB drugs and the possibility of using models for drug trials could help in the design and screening of potential compounds for testing. In addition, research on the genome might also help in identifying novel targets in developing new drugs.

6. Problems of low-level endemicity

Dr Tin Shwe presented the problems commonly faced by national programmes in low endemic situations. It was pointed out that each country will have to develop its own definition of what is low endemicity as the situation varies widely from country to country and even within countries. Generally speaking, looking at the data from 123 countries that reported to WHO in 2008, the majority of countries can be categorized as "low endemic". It was pointed out that in areas where the endemicity has decreased, programmes are reporting among new cases more new MB cases, an increasing proportion of grade-2 disabilities and more new cases detected among household contacts. However, as the numbers decrease it is important that the absolute numbers as well as rates per 100 000 population be looked into when expressing the magnitude of the problem.

It was also pointed out that as the prevalence declines the operational problems encountered are: low priority accorded to the leprosy programme, skills of the health workers becoming inadequate especially when staff turn-over rates are high, supervision and monitoring becoming weak and health workers losing motivation. On the part of the community, it was found that awareness becomes less and less as the numbers goes down and the stigma increases.

Surveillance of the disease will be one of the most important activities to be conducted under low endemic situations. In addition, innovative approaches needs to be developed based on population at-risk approach which will help to reduce the disease burden further in the community.

7. Methods and tools for epidemiological monitoring

In his presentation on methods and tools for epidemiological monitoring, Dr Krishnamurthy said that programme monitoring is important to assess the health status of the population, provide quantitative basis to set priorities, define strategies and evaluate interventions and outcomes. In measuring the occurrence or presence of the disease or health condition either incidence or prevalence or both are used. For epidemiological purposes, incidence is the preferred measure. In the case of leprosy, occurrence of the disease can be measured in terms of prevalence, new case detection, MB rate, child rate, smear positive rate, grade-2 disability rates, treatment completion rates, relapses and contact risks. Each of these has its own strengths and weaknesses and the kind of data to collect will depend largely on the objectives of the programme, how it is to be collected and used.

The importance of validating the data was also pointed out. To be able to collect reliable data, standard definitions and criteria are needed. Any additional data needed for the programme apart from those currently collected should be obtained through special efforts so as not to over-burden the general health services. Special efforts could be sample surveys, sentinel surveillance and revisiting sites with good monitoring practices. It was mentioned that epidemiological monitoring, instead of leading to new plans should lead to greater focus on what is already known and how to implement it while developing the Enhanced Strategy, 2011-2015.

8. Major issues in integration

Dr B. N. Reddy presented major issues with regard to integration and highlighted that currently in most control programmes it is only diagnosis and treatment services that have been integrated into the primary health care system. Secondary level care remains largely in the hands of specialized services which are operated as a vertical programme. As the occurrence of the disease declines further the general health care staff often refer cases for routine diagnosis to the secondary care level. In order to support the primary health care services a strong referral system needs to be established and such referral centres should be integrated into the general health care services.

Patient counselling needs improvement as well as the system of household contact examinations. In Nepal, for example, only 2.5% of the household contacts were examined whereas 32% of the index cases gave a positive history of contact. Treatment compliance is not monitored and nearly 50% of the records were either incomplete or not updated.

Supervision in an integrated system is ineffective because of mobility problems. Training of various categories of health workers is undertaken without considering the real needs of the programme with too many people being trained whereas only a very few actually participate in leprosy service delivery. Specialized leprosy units which are usually vertical in nature are hindering the integration process in some areas. These specialized leprosy units are essential in supporting the primary health care services in providing secondary care and it is important that their roles be clearly defined so that they are able to provide effective support to the integration process.

9. Future research needs

Professor W.C.S. Smith discussed the topic and highlighted that the current WHO Global Strategy (2006-2010) includes the following research priorities: prevention and management of nerve function impairment and reaction; improved chemotherapy; diagnostics to identify individuals at high risk of developing leprosy; and operational research to improve sustainability and integration of leprosy services. The published evidence on effective interventions to prevent leprosy needs to be critically reviewed and its implementation into practice considered.

Substantial evidence exists of the protective effect of BCG and field studies on ways of using BCG in programmes are currently being investigated such as its use in contacts. The trials based on combined regimens containing rifampicin, ofloxacin, and minocycline (ROM) from the 1990s are now producing results which will guide future policy on chemotherapy. Operational research demonstrates the potential to improve all aspects of leprosy control from case detection to treatment completion. There is important research in progress such as the Uniform-MDT trial aimed at developing a common MDT drug regimen for all types of leprosy. The Initiative for Diagnostic and Epidemiological Assays for Leprosy (IDEAL) collaboration and other groups are working to develop tests for infection/exposure and a system of typing *M. leprae*. There is a need for more operational research to improve leprosy control performance and for development of epidemiological tools to monitor completeness of case detection and for novel tests for exposure to infection. The development and trials of alternative drug regimens to address emerging rifampicin-resistance are also a priority for future research.

10. Timeframe and targets: the pros and cons

Dr Rashmi Shukla presented the topic on timeframe and targets and emphasized that without proper targets monitoring progress becomes difficult and the programme could be heading towards complacency. However, in setting targets and the timeframe one must also take into consideration the epidemiological as well as the operational aspects of

the disease along with its practicability and the broader issue of politics and funding. At what level to set the target and what should be the target has to be carefully considered after reviewing the programme thoroughly. As experiences in the past have shown, misuse of targets has greatly affected the performance of the services and in some instances the patient's well being as well. It is important that when targets are set in-built mechanisms are put in place to validate data and to limit the misuse of targets as a way to reflect programme performance.

If a target is set for a programme it should be based on scientific evidence and be realistic, attainable, reasonable and something that can be easily measurable so that one can develop a road map and monitor it accordingly. Setting targets and the timeframe should be done through a consensus-building effort. It was agreed that one of the advantages of target setting is that it justifies resources, provides accountability, enables better programme planning, monitoring and evaluation.

11. Experiences from the TB programme in setting targets

Dr K.A. Hyder from the WHO South-East Asia Regional Office shared experiences regarding setting targets. The TB programme has set the target of detecting 70% of sputum-positive cases annually in order to have an impact on the incidence of infectious TB cases as outlined in the Millennium Development Goals. This target has been regarded as a reasonable one considering that case detection is carried out passively and is influenced by various sociological factors and level of awareness in the community.

The expected number of new sputum-positive cases is being calculated through annual risk of tuberculosis infection (ARTI) surveys, TB infection rates in children and Styblo ratios. These figures are calculated in WHO headquarters and given to each country to set the targets. The proportion of estimated new smear-positive cases which are detected (diagnosed and notified to WHO) by DOTS programmes provides an indication of how effective national tuberculosis programmes are in finding people with tuberculosis and diagnosing the disease.

12. Under-detection: extent of the problem and solutions

Dr Osahon Ogbeiwi made a presentation on *"Under-detections: extent of the problem and solutions"*. Under-detection could be defined as detecting and reporting cases less than the number estimated/projected in an area. However, there are no reliable tools currently available to estimate the number of cases in an area. Indirect indicators such as grade 2 disabilities among new cases and the lack of effective case-finding activities carried out in an area are being used to get a rough idea of the situation of under-detection. The possible reasons for under detection in an area are: inadequate capacity of health workers in diagnosing a case, low awareness about the disease in the community, poor IEC activities to promote case-finding, weak household contact examinations, inadequate coverage and poor accessibility especially in difficult to reach areas and high stigma associated with the disease in many communities.

It was pointed out that to reduce the level of under-detection, especially in areas where the disease burden has declined significantly, the resources needed could be considerable and may not be cost-effective. It was suggested that research into modelling could help in estimating under-detection and that grade-2 disabilities among new cases could be a surrogate marker similar to lameness surveys being used in polio to estimate the number of polio cases that could be occurring in a community. Another idea discussed was using the period of delay in detection as a crude estimate of under-detection. It was stated that these ideas would require further research before they are applied in the programme.

13. Leprosy in underserved populations

Dr P.K.B. Patnaik gave a presentation on "Leprosy in underserved populations". The provision of quality leprosy services should be based on the principles of equity and social justice, as clearly stated in WHO's *Global Strategy for Further reducing the leprosy burden and sustaining leprosy control activities: 2006-2010,* and should be accessible to all who need them. However, leprosy services are still not adequately available in all areas, for example people living in difficult-to-access areas, areas cut-off due to natural calamities/ man-made calamities, tribal areas, peri-urban area and migratory / nomadic communities.

Analysis of case detection reveals that in the poorly served areas a higher number of MB cases with grade-2 disability are being detected, indicating that cases are being detected late in underserved populations. Gender parity remains a problem for all health issues in service delivery and its utilization, including leprosy. It has been found that if more out-reach services are provided, there are an equal number of cases among both sexes. For example, in India only 18-34% of new cases among females are being detected in routine programmes compared to 45-51% detected through a campaign approach. Children also remain largely underserved in many situations where poverty prevails.

It is suggested that for underserved areas and communities:

- A special area-specific strategy should be developed locally,
- An integrated approach should be adopted along with other disease control activities,
- Community level capacity building needs to be undertaken,
- A full course of MDT drugs for each new case detected should be made available with the treatment provider,
- More innovative approaches should be developed for service delivery,
- Mobile health units should provide out-reach services on a regular basis and
- Inter-sectoral coordination and networking with other development sectors and community functionaries should be developed.

14. Treatment compliance: extent of the problem and solutions

Dr A. Cunanan presented the topic on treatment compliance, the extent of the problem and solutions. The reasons for patients failing to report to the health centre for screening, diagnosis and continuation of treatment were: a) poor accessibility (distances, difficult journey, working hours of the clinic may be inconvenient and difficulty in taking time off work); b) lack of information about the disease and availability of treatment; c) stigma and fear of rejection by their community; d) poor relationship with the health worker; e) migratory life styles; f) other health problems and g) the persistent problem of shortage of MDT drugs at health centres.

Possible solutions to improving treatment compliance are: (a) improving access to leprosy services by enabling general health care facilities especially in endemic districts to ensure that patients are properly managed and referred to an appropriate health facility when needed; (b) ensure availability of free MDT drugs at the health facilities through improved distribution and logistics along with a flexible and patient-friendly drug delivery system; (c) motivating patients to complete their treatment through proper education and community awareness; and (d) regular supervision and monitoring to keep track of treatment compliance and taking timely corrective action.

WHO is currently collecting data on cure/treatment completion rates which provide indirect information on treatment compliance which is based on collecting the required number of MDT blister packs needed to complete the prescribed course of treatment. On a routine basis counting the total number of pills consumed per month is not practical and could even be counter productive. Further research in the area of developing a simple test should be encouraged to help monitor drug compliance to different components of MDT, like the urine test for dapsone.

15. Involvement and inclusion of “Tojisha” in leprosy programme

Ms Soyagimi gave a short presentation on the Japanese experience of involving “Tojisha”, which generally means “the party concerned”, the party who has needs to be met, hence is in a position to determine the needs. In the context of leprosy, "the party concerned" includes persons affected by leprosy undergoing treatment, persons cured of leprosy, family members of persons affected by leprosy and the community that shares the needs of the leprosy-affected persons.

A quality programme comprises of elements that well reflect and respond to the needs of its primary beneficiary. "The party concerned" is a primary beneficiary of the quality programme. Because of this reason, they are a valuable resource to the programme. They can share their experiences with members of the community especially in promoting early diagnosis and treatment in addition to helping in activities associated

with prevention of disabilities and management of complications. As a group, they could be empowered to raise awareness about the disease, work on reducing stigma and discrimination and liaise with other groups with similar needs and, as a result, contribute to enhancing and sustaining the programme. The challenge will be to ensure that these individuals are accepted as equal partners, share opportunities and recognize them as assets in society.

16. General discussions on setting targets to monitor progress

As a follow-up to the discussions on the various issues related to setting targets for the global strategy Dr V. Pannikar presented the current leprosy burden in terms of total new cases detected annually along with children, MB and grade-2 disabilities among new cases reported to WHO in 2007. It was shown that about 250 000 new cases were detected during 2007 in the five WHO Regions (excluding Europe) with a new case detection rate of around 6 per 100 000 population. About 24 000 new child cases were reported among new cases with a rate of around 0.5 per 100 000 population and around 145 000 new MB cases were reported with a rate of around of 3.0 per 100 000. The grade-2 disabilities among new cases reported were around 15 000 with a rate of 0.3 per 100 000. The proposal to set a global target for reducing grade-2 disabilities among new cases in the population as rate per 100 000 was agreed upon.

The benefits of using this indicator are:

- promote early case detection
- reduce delays in diagnosis leading to reduction in transmission
- estimate under-detection
- reduce stigma and discrimination
- reduce costs on disability care
- reduce costs for physical and social rehabilitation
- promote PoD activities
- promote collaboration with other partners
- minimizes opportunities for manipulation (as rate per 100 000 population) and
- likely to be acceptable to all stake-holders, including persons affected by leprosy

The participants agreed that at the global level grade-2 disabilities among new cases is the most appropriate indicator to monitor progress and that rates should be used based on rate per 100 0000 population along with absolute numbers.

17. Next steps

It was agreed to set up a working group to identify key components which need to be enhanced, including for those topics not included in the agenda of this meeting and incorporated in the draft *"Enhanced Strategy for reducing leprosy burden in endemic countries: 2011-2015"*. This draft will be shared with all partners and experts to get their comments and suggestions. It was also proposed that a global meeting involving selected national programme managers from all WHO Regions, representatives of key partners and experts be tentatively scheduled for April 2009. During the meeting the draft enhanced strategy 2011-2015 will be discussed with all stakeholders with the aim to obtain consensus and support for the strategy.

18. Conclusions and recommendations

(1) After an in-depth discussion on the merits and demerits of setting numerical targets and time frames, the consultative group recommended that the enhanced strategy for reducing leprosy burden should include setting of realistic numerical targets based on grade 2 disabilities among the new cases which is likely to indirectly reflect the level of occurrence of new cases in the population. It was agreed to have a small working group on this issue to review available data and project targets for the future.

The group firmly believes that setting a global target, based on reducing the occurrence of grade-2 disabilities among new cases in the population, is likely to have an impact on reducing the occurrence of new cases in the population.

(2) In most of the previously high endemic countries the current leprosy profile shows a relative low endemicity, while in others it is reaching the profile of rare disease status. The group considered that under such a situation, the risk of leprosy among household contacts is likely to achieve high significance.

The group recommended that in areas where a high proportion of new cases are being detected among contacts, examination of household contacts at the time of diagnosis of a new case and providing single dose rifampicin to such household contacts as prophylaxis would be a useful measure to reduce the occurrence of leprosy in the community.

(3) Recognizing the long and relatively complex studies are needed for testing of efficacy and safety of newer drug regimens for anti-leprosy chemotherapy,

The group recommended that it will be important to embark soon on testing of alternative treatment regimens. Such regimens will be particularly necessary to counter the possible threat of rifampicin resistance.

(4) The group stressed the importance of continuing research, particularly in key areas of disease prevention, drug development and operational research for improving tools and methods for disease control and improving the quality of clinical services, including referral services.

(5) The group recommended that capacity building of general health services personnel is important for providing adequate services for leprosy. However, capacity building programmes should carefully assess the needs and direct such efforts only to areas where leprosy occurs in order for the programme to be efficient and cost-effective.

(6) The group expressed concern over persistent weakness of supervision in many programmes which was seen even during the era of specialized national leprosy control programmes. The situation in the current integrated leprosy control era will need enhanced supervisory support, particularly at the field level.

The group recommended that appropriate resources, particularly for mobility, should be made available to promote and strengthen effective supervision at all levels.

(7) With the decreasing occurrence of leprosy the issue of integration should be carefully re-assessed so that specialized services are available where necessary and at the appropriate level.

(8) There is a need to focus on underserved populations so that the magnitude of leprosy among them is assessed and locally specific sustainable anti-leprosy strategies are developed with intersectoral collaboration.

Annex 1

Agenda

Wednesday, 17 September 2008
Thai Room, 2nd Floor

09.30-10.00	➢ Welcome by the Regional Director: *Dr Samlee Plianbangchang* ➢ Opening remarks by Chairman Chair: *Dr S.K. Noordeen* Co-chair: *Dr H.J.S. Kawuma* Rapporteurs: Dr Arturo Cunanan and Dr Myo Thet Htoon ➢ Introduction of participants ➢ Objectives of the meeting (*Dr V. Pannikar*)
10.00-10.30	➢ Current Global Situation in Leprosy (*Dr Myo Thet Htoon*) ➢ Discussion
10.30-11.00	*Tea break*
11.00-11.30	➢ Current global challenges in Leprosy (*Dr H.J.S. Kawuma*) ➢ Discussion
11.30-12.00	➢ Opportunities for better Chemotherapy (*Dr V. Pannikar*) ➢ Discussion
12.00-12.30	➢ Problems of low-level endemicity (*Dr Tin Shwe*) ➢ Discussion
12.30-13.30	*Lunch break*
13.30-14.00	➢ Under detection: extent of the problem and solutions (*Dr Osahon Ogbeiwi*) ➢ Discussion
14.00-14.30	➢ Methods and Tools for epidemiological monitoring (*Dr P. Krishnamurthy*) ➢ Discussion
14.30-15.00	➢ Leprosy in Underserved Populations (*Dr P.K.B. Patnaik*) ➢ Discussion

15.00-15.30
- Treatment compliance: extent of the problems and solutions (*Dr Arturo Cunanan*)
- Discussion

15.30-16.00 *Tea break*

16.00-16.30
- Major issues in Integration (*Dr B.N. Reddy*)
- Discussion

16.30-17.00
- Timeframe and Targets: pros and cons for leprosy programme (*Dr Rashmi Shukla*)
- Discussion

17.00-17.30
- Future Research Needs (*Professor W.C.S. Smith*)
- Discussion

Thursday, 18 September 2008
Thai Room, 2nd Floor

09.00-10.30 (1) Technical issues – Discussion
Facilitator: *Professor Smith*

10.30-11.00 *Tea break*

11.00-12.30 (2) Operational issues – Discussion
Facilitator: *Dr Krishnamurthy*

12.30-13.30 *Lunch break*

13.30-15.00 (3) Strategic issues – Discussion
Facilitator: *Dr Osahon Ogbeiwi*

15.30-16.00 *Tea break*

16.00-17.00 Discussion and approval of recommendations

Annex 2

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The report highlights the outcome of an informal consultation that was held by the Global Leprosy Programme on 17-18 September 2008 at New Delhi, India. Experts were invited to discuss various issues related to leprosy control and to explore innovative ideas that will improve current leprosy control activities. The recommendations made during this consultation will be considered for the development of the World Health Organization's "Enhanced Strategy for Reducing the Leprosy Burden in Endemic Countries 2011-2015".

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