Report of the Eleventh Meeting of the WHO Technical Advisory Group on Leprosy Control

New Delhi, India, 30 September 2011

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1. Introduction

The Eleventh Meeting of the WHO Technical Advisory Group (TAG) on Leprosy Control was held in New Delhi, India, on 30 September 2011, immediately following the Global Programme Managers' Meeting held at the same venue on 28–29 September 2011. The meeting was attended by members of the TAG; experts invited from the areas of chemotherapy research, drug resistance surveillance and social science, as well as representatives from the International Federation of Anti-Leprosy Associations (ILEP) and Regional Advisers from the WHO regions. The meeting was chaired by Dr H. J. S. Kawuma. The terms of reference of the WHO Technical Advisory Group on Leprosy Control, programme of the meeting and the list of participants are given in Annex 1, 2 and 3, respectively.

Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia Region, SEARO, New Delhi while welcoming the participants appreciated the role of TAG in providing excellent technical advice to the Global Leprosy Programme over the years. The programme has been successful in reducing the leprosy burden over the past decade as seen by the declining trends in new case detection globally as well as in the WHO regions. However, Dr Samlee cautioned, "we must continue to be vigilant and sustain leprosy control activities so that new cases are diagnosed and cured in a timely manner and encouraged to live a normal productive life. In order to achieve this, all components of the referral system need to be integrated."

2. Report of the Tenth TAG Meeting

The report of the Tenth TAG Meeting held in New Delhi, India, on 23 April 2009 was approved by all members.

3. Review of the global leprosy situation

Dr Kawuma reviewed the current leprosy situation in his presentation. WHO received reports from 130 endemic countries on leprosy situation as of end of 2010. During the year a total of 228 474 new cases were reported, while 192 246 patients were still on register for treatment at the end of 2010. The disease continued to show a declining trend in new case detection. However, the decline is not uniform in all regions or countries. In fact some countries (Philippines, Sri Lanka and Sudan) showed increased new case detection during 2010.

During the year, about 13 000 new cases were reported to have presented with grade-2 disabilities (G2D) at the time of diagnosis, majority of these (72.3%) were from

Africa and the South-East Asia Region. The rate per 100 000 population for G2D is highest (0.40) for Africa and lowest (0.03) for the Western Pacific Region. The proportion of G2D among new cases reported was highest in China and Sudan (23%) and lowest in Marshall Islands (0%).

An increasing number of countries are reporting relapses on a regular basis to WHO. A total of about 2300 relapses were reported in 2010. So far no dramatic fluctuations have been noticed in the trend of reporting on relapses as this is an important proxy indicator for monitoring the efficacy of multidrug treatment (MDT) and possible emergence of drug-resistant strains of *Mycobacterium leprae*. The reporting on cure/treatment completion rates is not yet optimal, particularly from endemic countries in Africa. In general cure rates are better for paucibacillary (PB) than multibacillary (MB) cohorts of patients. The prevalence–detection ratio (P/D ratio) is unacceptably high in three of the five reporting WHO Regions, indicating relatively suboptimal case-holding strategy in programmes.

Concerns were expressed regarding the quality and completeness of the national data on leprosy. Efforts are required to improve the quality of recording and reporting of leprosy cases that are used to monitor the essential indicators. Programme evaluations and sample surveys can be used along with strengthened supervision to improve the quality of the information collected. Situational analysis should be used to identify high-burden areas within countries to prioritize activities. Further investigation of the operational aspects for implementation of contact examination and chemoprophylaxis for contacts to enhance the reduction in new cases is recommended.

4. Mechanisms to monitor the progress in terms of the global target of reducing the rate of new cases with G2D

Professor W.C.S. Smith introduced the topic of mechanisms for monitoring progress in using the global target of at least 35% reduction in the rate of new cases with grade-2 disabilities per 100 000 population at the end of 2015, compared with the baseline at the end of 2010. The rate of new cases with G2D when viewed together with other indicators can be used to estimate underdetection, to measure the need for physical and social rehabilitation, and to advocate for prevention of disabilities and promote collaboration with other sectors. There are several factors that affect new case-detection activities, such as effectiveness of information, education and communication (IEC), competence of health workers, quality of supervision and coverage of the programme. In addition, the starting level of G2D per population varies between countries and regions. For example Bangladesh, China and Philippines are starting at lower levels compared with countries such as Brazil, Mozambique and the Democratic Republic of the Congo. Professor Smith suggested that:

- all new cases should be assessed for grade-2 disabilities and the findings recorded and reported in standard formats;

- the WHO grade-2 disability grading should be used for collecting data for the population-based indicator as described in the Updated Operational Guidelines for the Enhanced Global Strategy to ensure uniformity.

Training by national programmes is important to ensure validity and reliability of grade-2 disability assessment, recording and reporting. Validation of data on a sample basis, where possible, is recommended.

5. Review of the global surveillance for drug resistance in leprosy and the next steps

The global surveillance for drug resistance in leprosy was introduced by Dr M. Matsuoka. After a brief history of chemotherapy of leprosy and occurrence of resistance to various antileprosy drugs, Dr Matsuoka introduced the developments in molecular methods to detect drug-resistant mutation in *M. leprae*. The paucity of information on the magnitude of drug resistance in leprosy was mainly due to tediousness and high cost of assessing drug susceptibility using mouse footpad methods in the past. However, limited reports/data do not necessarily mean low magnitude of the problem.

Today the main concern is about potential development of drug resistance to rifampicin, the sheet anchor of chemotherapy regimens in leprosy. The method used now is to screen for resistance by polymerase chain reaction (PCR) direct sequencing to detect mutations in drug resistance detecting regions (DRDR) in the *folP* (dapsone), *rpboB* (rifampicin) and *gyrA* (quinolone) genes. Samples of slit-skin smears preserved in ethanol are used. The mouse footpad is not used anymore for assessment of drug resistance.

The WHO surveillance network collects samples from MB patients who have taken a full course of MDT and have relapsed. WHO has established a network of sentinel centres in 16 endemic countries and a corresponding network of laboratory facilities for molecular testing of samples around the world. Dr Matsuoka concluded that:

(1) the level of drug resistance in rifampicin is not a serious situation at present;

(2) longitudinal surveillance should be continued to reveal the trend of drug resistance in leprosy as the drugs in use are not protected from unconventional use;