Technical Advisory Group on the Global Elimination of Lymphatic Filariasis (TAG-ELF)

Report of the Fifth Meeting
Geneva, Switzerland
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TECHNICAL ADVISORY GROUP ON THE GLOBAL ELIMINATON OF LYMPHATIC FILARIASIS

Report of the Fifth Meeting
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1. Opening and introduction

The Fifth Meeting of the Technical Advisory Group on the Global Elimination of Lymphatic Filariasis (TAG-ELF) was held in the headquarters of the World Health Organization (WHO), Geneva, Switzerland, from 3 to 6 February 2004. The meeting was opened by Dr H. Endo, Director, Department of Control, Prevention, and Eradication (CPE) of the Communicable Diseases Cluster. Dr Endo welcomed all the participants and thanked TAG-ELF members for contributing their time and expertise. He pointed out that the meeting was particularly critical because of the financial crisis affecting WHO and the Global Programme to Eliminate Lymphatic Filariasis (GPELF).

The meeting was attended by all 14 members of TAG-ELF. Other participants were members of the WHO Secretariat, staff of the WHO Regional Offices for Africa, the Americas, the Eastern Mediterranean, South-East Asia, and the Western Pacific, technical experts to advise TAG-ELF on specific issues, and observers from the Global Alliance to Eliminate Lymphatic Filariasis (GAELF). Dr K.Y. Dadzie continued to serve as Chairman and Dr D. Addiss was appointed Rapporteur. Dr Dadzie welcomed the participants and introduced two new TAG-ELF members – Professor Dato Dr C.P. Ramachandran (Malaysia) and Dr Addiss (USA). A full list of participants is given in Annex 1.

Dr Dadzie suggested minor rescheduling of the agenda. Dr Ramachandran moved to accept the revised agenda and this was seconded by Dr R. Henderson. The agenda adopted is given in Annex 2.

Dr Henderson pointed out that the financial crisis affecting WHO was also felt by the filariasis elimination programmes at country level, and suggested that "packaging" lymphatic filariasis (LF) elimination with programmes for the control of other parasitic diseases, such as intestinal helminths, might have advantages. Dr Dadzie agreed and indicated that this issue would be addressed on the agenda.

2. Global Programme to Eliminate Lymphatic Filariasis – update

Drs G. Biswas, F. Rio, and S. Yactayo reported on progress made by the Global Programme to Eliminate Lymphatic Filariasis (GPELF) since the previous TAG-ELF meeting in March 2003. Their reports included updates on mapping, mass drug administration (MDA), drug procurement, disability prevention, social mobilization, and training and capacity building

2.1 Mapping and scaling up of mass drug administration

A total of 83 countries are now considered LF-endemic, including three that have been added to the list since the previous TAG-ELF meeting, namely the Marshall Islands, Palau and Timor-Leste. Four countries that have been considered LF-endemic but in which surveys have not detected infected persons or, in some cases, infected mosquitoes, have been included in the list: they are Costa Rica, Solomon Islands, Suriname, and Trinidad and Tobago.

Of the 83 LF-endemic countries, 45 have completed mapping. Mapping is currently in progress in 18 countries and is planned in nine others (see Table 1). In the remaining 11 countries, plans for mapping have not yet been formulated. The current version of the immuno-chromatographic card test (ICT) requires that it be read at 10 minutes. During 2003, 107 000 ICT cards were procured by WHO for mapping and were provided to endemic countries. The manufacturer, Binax, has raised the cost of the cards to US$ 2.20 each, based

on a minimum guaranteed purchase of 200 000 cards per year. It is difficult for WHO to guarantee the purchase of this number, as funds are currently limited.

Table 1. Progress in mapping of LF distribution by regional PRG in 2003

Region	Completed	In progress	Planned	Outstanding	No. of countries
Africa	13	8	8	10	39
Americas	5	2	0	0	7
Eastern Mediterranean	2	0	1	0	3
Mekong-Plus	7	4	0	1	12
Indian Subcontinent	2	3	0	0	5
PacELF	16	1	0	0	17
Total	**45**	**18**	**9**	**11**	**83**

By the end of 2003, a total of 38 countries were implementing MDA. During the course of that year, about 81 million people received two-drug combinations of either albendazole plus diethylcarbamazine citrate (DEC) or albendazole plus ivermectin, and 52 million received DEC alone; this total coverage of approximately 133 million people is a remarkable achievement (see Tables 2 and 3). However, the at-risk population in these 83 endemic countries is approximately 1.3 billion, meaning that only 6.5% of the total at-risk population have participated in MDA. One country has completed five rounds of MDA, implementation units (IUs) in 11 countries have completed four, and another 11 countries have completed three rounds.

Table 2. Progress of MDA with co-administrated drugs in 2003

Region	No. of endemic countries	At-risk pop. in millions	% of global burden	No. of countries started MDA	At-risk pop. covered in 2003 in millions	% of at-risk pop. covered in 2002
Africa	39	477	37.9	9	23.6	4.95
Americas	7	9	0.7	3	1.9	21.11
Eastern Mediterranean	3	29	2.3	2	2.6	8.97
Mekong-Plus	12	214	17	6	22.5	10.51
Indian Subcontinent[a]	5	524	41.6	4	28.6	5.46
PacELF	17	6	0.5	14	2.2	36.67
Total	**83**	**1259**	**100.0**	**38**	**81.4**	**6.47**

[a] India: in addition, 52 million people were covered with DEC alone.

Table 3. Progress of MDA with co-administered drugs 2000–2003

Region	No. of endemic countries	Implemented MDA in 2000	Implemented MDA in 2001	Implemented MDA in 2002	Implemented MDA in 2003
Africa	39	3	6	9	8
American	7	0	1	2	3
Eastern Mediterranean	3	1	1	2	2
Mekong-Plus	12	1	2	5	6
Indian Subcontinent	5	0	3	3	4
PacELF	17	6	9	11	14
Total	**83**	**11**	**22**	**32**	**37**[a]

[a] One of the 38 countries that had initiated MDA earlier could not implement MDA in 2003 because of local political upheaval.

IUs are quite heterogeneous in size and in the population they cover, ranging from less than 2000 in Niue to 12 million in Bangladesh. This makes comparisons difficult and recommendations at the IU level, such as the number of sentinel sites required per IU, hard to standardize.

2.2 Drug procurement

Cost and availability of DEC were the same as reported to TAG-ELF last year. In 2003, WHO procured 121 million DEC tablets and provided them to the national filariasis elimination programmes.

2.3 Disability prevention, social mobilization, training and capacity building

Dr Rio reviewed progress in disability prevention. A framework for action and basic principles for disability prevention is in final draft form and a pilot project has been launched to increase access to surgery in Zanzibar, United Republic of Tanzania. Progress has been made on the development of an assessment tool for disability based on the WHODAS* and ICF† checklists. A joint WHO/TDR‡ and WHO/CPE workshop on the prevention of disability was held in Sri Lanka in November 2003.

In the area of social mobilization, a survey of programme managers indicated that they realized the importance of social mobilization but lacked training in how to put it into practice. Drs R. Baru and M. Gopal recently completed an assessment of the dynamics of social mobilization, the findings of which are summarized in Annex 3.

A training package on disability prevention has been revised and translated into French. Training modules for drug distributors have also been revised following feedback from national programme managers, and guidelines for country adaptation of training materials have been developed. A series of guidelines is being developed for district medical

* WHO Disability Assessment Schedule.

† *International Classification of Functioning,, Disability and Health.* Geneva, World Health Organization, 2001.

‡ UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Disease.

officers/teams on disability prevention, monitoring and surveillance, MDA and social mobilization.

2.4 Follow-up of previous TAG-ELF recommendations

Dr Biswas reviewed several achievements in the follow-up to previous TAG-ELF recommendations, including:

- dissemination of revised guidelines in regional programme managers' meetings;
- modification of annual reporting formats to include indicators, such as coverage, for the eligible population;
- drafting of guidelines for district medical officers on monitoring at the IU level;
- drafting of additional guidelines for district medical officers on disability prevention, social mobilization, and MDA campaigns;
- TDR support of work on LYMFASIM to further refine this model for use in Africa;
- progress in developing indicators for disability prevention;
- inclusion of an integrated database in the latest version of HealthMapper; and
- development of a global strategic plan which has been discussed with the Secretariat of the GAELF, and with programme managers at regional meetings.

Dr Biswas also mentioned major challenges to the Global Programme, which are similar to those discussed last year and which include:

- scaling up of MDA;
- ensuring and maintaining high drug coverage in urban areas;
- the non-implementation of MDA in *Loa loa* co-endemic areas;
- implementation of community-based self-care disability prevention programmes that cover entire IUs;
- the need for more sensitive, specific and operationally feasible monitoring tools;
- lack of resources for operational research and scaling up; and
- completion of mapping of LF-endemic countries.

2.5 Regional Programme Review Group (PRG) updates

To complement the Secretariat's update, reports from regional Programme Review Groups (PRGs) were presented by Drs M. Ismail (Chair, Indian Subcontinent PRG), J. Gyapong (Chair, African PRG), S. Persaud (Chair, American PRG), and Dato C.P. Ramachandran (Chair, Mekong-Plus PRG).

Several countries have dramatically increased the number of persons receiving antifilarial drugs through MDA, but lack of anticipated funds resulted in several countries having to scale back plans for programme expansion. Lack of funds has become a critical issue for many, if not most, countries. Fundraising is difficult, partly because programme managers, as government employees, are not allowed to receive (or sometimes, even to seek) donations and lack fundraising skills.

Other issues raised in these presentations included the following:

- several countries have completed three or four rounds of MDA and are seeking guidance on when they can safely stop MDA;

- community mobilization is critical to the success of MDA and to achieving high drug coverage;
- mapping is still to be done in many countries in the African region;
- it has been difficult to focus on disability prevention activities, particularly in view of budgetary constraints and pressure to scale up MDA;
- the need – particularly in view of shrinking resources – to develop increased synergy with other programmes such as onchocerciasis, malaria, schistosomiasis, and intestinal parasite control;
- China, which has achieved "virtual elimination" based on its own national criteria, is likely to request a delegation from WHO to advise it on preparing documentation to show that transmission has indeed been interrupted;
- regional PRGs vary greatly in their capacity to provide technical assistance to programme managers;
- in Guyana, the only country to have a national programme based on the use of DEC-fortified salt, recent challenges to the programme have included discoloration of salt and the consequent negative public reaction; once these problems have been addressed, these will prove to have been good learning experiences that will provide a more solid footing for salt-based programmes elsewhere.

There was much discussion on these regional updates. TAG-ELF was impressed by the achievements that have been made in such a short period of time but expressed concern about the lack of operating funds, which is a serious constraint to further expansion. Professor Dato Dr C.P. Ramachandran suggested that the draft of the updated strategic plan should not be released in its current form, since it is based on the assumption that adequate programme funds will be available. Other TAG-ELF members agreed.

TAG-ELF welcomed the actions taken by the Secretariat to pursue recommendations made by its fourth meeting (TAG-ELF-4) in March 2003.

2.6 Report of the Chair, Task Force for Communications, Global Alliance to Eliminate Lymphatic Filariasis

Professor D.M. Molyneux, Chair of the Task Force for Communications of the Global Alliance to Eliminated Lymphatic Filariasis (GAELF), reported to TAG-ELF on his work to assess and take advantage of donor opportunities for support of LF elimination programmes. He emphasized that, the funding and financing environment has changed significantly since the launch of GPELF. Increasingly, bilateral donors are decentralizing decisions to country offices; other changes include the expansion of sector-wide approaches (SWAPs), increased basket funding by donors, and the advent of the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Other disease control initiatives have a lowered priority for funding if they cannot be linked to one of the "big three" diseases supported by the Global Fund or to the Millennium Development Goals.

However, Professor Molyneux reported that he had had discussions with the Global Fund in which he and Dr Biswas presented the case for synergy between malaria control programmes and MDA for LF elimination. In view of the popularity of anthelminthic drugs, distribution of albendazole for LF could be linked to bednet distribution and net re-impregnation to:

- improve rates of bednet use and re-impregnation;
- provide the proven benefits of deworming, including reduced anaemia (a major cause of both infant and maternal mortality) and improved cognitive development, physical health, and school attendance; and

- based on recent studies in Senegal, reduce – by an order of magnitude – the frequency of malaria fevers.

The Global Fund indicated that it could consider funding applications from countries that include this synergistic approach to public health interventions. The Global Fund also provided information on other initiatives in LF-endemic countries where bednet distribution was being linked to interventions supported by the International Red Cross. The United Nations Children's Fund is involved in distributing albendazole to all children aged 2–18 years in certain countries together with vitamin A and bednets. These opportunities require more active networking at the country and global levels with the range of actors whose interests have not yet engaged the LF elimination community. Professor Molyneux emphasized the importance of LF programme managers becoming aware of these opportunities and working to submit applications to the Global Fund at the earliest opportunity. The deadline for applications is mid-March 2004.

2.7 Update on informal consultation on fundraising for lymphatic filariasis in Africa

Dr N. Twum-Danso presented a summary of an informal consultation held at the Mectizan® Donation Program on 15 January 2004 to address fundraising opportunities for LF elimination in Africa. The report outlined key issues and priorities for fundraising and provided recommendations for the next steps to be taken. TAG-ELF welcomed this report, acknowledging the paradigm shift for fundraising from the international to the regional and country levels, and stressed the importance of urgent fundraising for continuation of ongoing programmes in Africa. A discussion followed on the degree to which regional PRGs and regional LF support centres might appropriately play a role in fundraising.

2.8 Report of the Chairman, TAG-ELF

Dr K.Y. Dadzie reported on his work and the meetings he attended last year and at the beginning of this year to represent TAG-ELF. These included the regional PRG and programme managers' meetings of the Indian Subcontinent and Mekong-Plus regions; the Gates Grant Review Committee, in Callaway Gardens, GA, USA, April 2003; the Mectizan® Expert Committee in Whitehouse Station, NJ, USA, October 2003; the LF Research Forum, Philadelphia, PA, USA, December 2003; and a workshop on LF and health systems research, Crewe, England, January 2004. Dr Dadzie's attendance at these meetings has facilitated communications with other advisory and interest groups within the Global Alliance and has served to raise awareness among these other partners about TAG-ELF and its responsibilities.

3. Monitoring and evaluation issues

3.1 Report of the monitoring and evaluation working group

Dr E. Ottesen reviewed progress on the activities of the monitoring and evaluation working group that were requested by TAG-ELF-4. Final documents included in the set of materials provided to TAG-ELF members were:

- a refined set of proposed indicators for monitoring LF disability management or prevention;
- a manual for programme managers on the use of DEC-fortified salt, including recommendations for quality control and assessment of coverage and programme impact;

- a PowerPoint presentation for programme managers on monitoring and evaluation, which has been used for presentations at several regional PRG meetings;
- updated formats for country profiles; and
- updated supplements on monitoring and evaluation for the programme manager's guidelines.

Dr Ottesen also outlined five issues for monitoring and evaluation that require urgent attention as follows:

- quality assurance of monitoring and evaluation data collected and processed by national programmes;
- testing currently recommended strategies for surveillance (both post-MDA and so-called "background" surveillance), for deciding when to stop MDA, and for verifying the absence of transmission;
- comparing the utility of tests based on filarial antigen, antibody, DNA and microfilaria detection to measure progress towards LF elimination;
- testing proposed indicators for disability management; and
- developing guidelines for monitoring and evaluating LF elimination in situations where these activities are coordinated ("integrated") with other public health programmes (e.g. onchocerciasis, schistosomiasis, intestinal helminths, malaria, trachoma, or vector control programmes).

TAG-ELF members thanked Dr Ottesen for his report and for the documents from the monitoring and evaluation working group. They recommended that the Programme focus increased attention on these issues. Several points were raised in discussion. Dr Ramachandran pointed out that, with current tools, it is very difficult to provide guidance to programme managers on whether their programmes have succeeded in interrupting LF transmission. Dr K. Palmer reminded TAG-ELF of China's intention to request assistance in verifying the absence of transmission. Dr N. Zagaria stated that WHO would welcome such a request from China and would organize a joint mission, including representation from the monitoring and evaluation working group of TAG-ELF, to review the situation and to provide guidance on the necessary documentation.

3.2 Field module on monitoring PELF

Dr Yactayo presented a draft of the document *Monitoring and epidemiological assessment of the programme to eliminate lymphatic filariasis at the level of the implementation unit.* TAG-ELF welcomed this document, a copy of which was included in the meeting materials.

Dr Gyapong questioned whether the data required from each IU could be reduced in quantity but improved in quality.

3.3 Use of simulation models in programmatic decisions – status of tools available, potential areas of use, and their limitations

Dr J. Habbema reviewed components and epidemiological parameters of the simulation model LYMFASIM and the status of LYMFA-Win, a user-friendly Windows version of the model. He pointed out that the current model is based on data from Pondicherry, India, and fits the data properly only when antifilarial immunity is assumed to develop in infected persons. The LYMFASIM model allows examination of the effect of drug coverage on the number of annual MDAs required to interrupt *Wuchereria bancrofti* transmission (at 65% coverage, seven or eight annual MDA campaigns maybe required given the other assumptions

in the model). The Pondicherry-based model is fully operational and a scientist from Vector Control Research Centre is now fully trained in its use. However, different vector–parasite complexes and epidemiological situations limit the validity of this model for other regions.

Other progress with LYMFASIM includes:

- quantification of the model for drug combinations, DEC plus albendazole and ivermectin plus albendazole;
- preliminary collaboration with colleagues in Samoa, which suggests that the Pondicherry model does not fit the Samoan context;
- collaboration with colleagues in French Polynesia, which showed a large reduction in microfilaraemia after the first round of MDA with DEC and albendazole but much more limited reduction following subsequent rounds.

TAG-ELF thanked Dr Habbema for his report and discussed further developments required to make LYMFA-Win both accurate and user-friendly for programme managers and scientists in a variety of LF-endemic countries in several regions. To make the model most useful at the programme level, Dr Habbema said that further development should focus on answering the question of when to stop MDA. To be able to answer this question with confidence, additional work is needed. Dr Habbema said that, with appropriate input from investigators working in different epidemiological/entomological environments and with significant resources, significant progress could be realized within two years, when many more countries will have completed their fifth round of MDA.

3.4 Indicators for monitoring disability prevention

Dr Addiss presented a report on proposed indicators, developed by the monitoring and evaluation working group, for monitoring disability prevention – specifically for lymphoedema management and hydrocele surgery. Several indicators were suggested that might be the most appropriate for various stages of programme development and at different programme levels, from the IU to the global level. The current indicators recommended by TAG-ELF-4 for monitoring by WHO at the global level are included in this expanded list. TAG-ELF does not recommend any changes in these global indicators at present, but approves the adoption and testing of these new indicators by country programme managers if they wish.

TAG-ELF discussed the role of disability prevention in national programmes, the lack of adequate programme funding to implement it properly, and how best to organize it within the health system.

4. Chemotherapy

4.1 Impact of mass drug co-administration on reducing microfilaraemia

Dr Yactayo presented data on the impact of MDA on microfilaraemia prevalence. Among countries that have completed three or more rounds of MDA, most, but not all, have achieved microfilaraemia prevalence of <1% in the sentinel sites.

In Samoa, for example, the baseline prevalence of antigenaemia and microfilaraemia was 7.4% and 1.5% respectively in 1998. In 2003, prevalence levels were 1.5% and 0.24%,

respectively. This decrease was achieved despite coverage of <65% in two of the five years of MDA.

In Zanzibar, United Republic of Tanzania, the baseline prevalence of microfilaraemia in 2000 was 7.2% and 17.8% on the islands of Unguja and Pemba, respectively. MDA campaigns were completed in 2001, 2002, and 2003. In 2003, the prevalence of microfilaraemia was 0.4% and 1.6% on these islands, respectively.

In Togo, four rounds of MDA were completed from 2000 to 2003. Baseline microfilaraemia prevalence in three sentinel sites was 10.0%, 1.2% and 0.6%. At the mid-term evaluation in 2003, the microfilaraemia prevalence in these three sites was 0.6%, 0% and 0%, respectively. Reported drug coverage was 65% or higher for each year.

In Egypt, four rounds of MDA have been completed between 2000 and 2003. Baseline microfilaraemia prevalence in 25 sentinel sites ranged from <1% to 4.3%. Reported coverage was greater than 90%. Before the third round of MDA, the microfilaraemia prevalence was <1% in all sentinel sites.

Thus, significant decreases in microfilaraemia have been observed. The general trend in most countries is for a significant decline in microfilaraemia prevalence and density with MDA. Dr Addiss requested an in-depth analysis for TAG-ELF-6 of situations in which such a decline in microfilaraemia has not been observed. Drs Kyelem and Gyapong pointed out the need for standardization of data collection, specimen collection, laboratory techniques and reporting.

Dr Henderson congratulated the Secretariat for its excellent job in assembling and summarizing these data – a sentiment that was shared by all TAG-ELF members.

4.2 Age groups that escape treatment with chemotherapy because they are under 90 cm tall

At TAG-ELF-4 (March 2003), data were presented on the likely contribution of children of aged 1–4 years to filariasis transmission in Africa. Currently, eligibility for ivermectin in most onchocerciasis-endemic African countries is based on height (occasionally weight) rather than age. It remains unclear how many children under 5 years of age are eligible for MDA using ivermectin. To address this issue, TAG-ELF-4 requested a review of height, weight, and age in LF-endemic countries in Africa.

Dr Gyapong presented data on height, weight, and age of 1060 children under 10 years of age from Kintampo District, Ghana. In this district, virtually all children over 5 years of age are more than 90 cm tall and therefore eligible for treatment with ivermectin. The proportion of children that are taller than 90 cm is 86.9%, 40.9%, and 6.5% for children 4, 3, and 2 years of age respectively. Therefore, it appears that 42% of children under 5 years of age in LF-endemic areas of Ghana are eligible for MDA based on current height-based criteria.

A rich discussion followed on the potential public health benefits of treating all children who are under 90 cm tall and over 1 year of age with albendazole alone during MDA for LF, and on the programmatic and logistic challenges of such a policy. To adopt such a strategy for LF in Africa would add an age-based criterion to an existing criterion of height. Further, treatment of 1-year-old children would require a different (200 mg) formulation of albendazole. On the basis of these programmatic difficulties and the data presented by Dr Gyapong showing that many children under 5 years of age are already being treated during

MDA campaigns, it was recommended that no changes be made in the current criteria for MDA eligibility in Africa .

4.3 Benefit of chemotherapy in the 1–5-year age group

Dr L. Savioli reviewed the data on the impressive health benefits and safety of anthelminthic drugs in general, and albendazole in particular, for young children. TAG-ELF welcomed this presentation, which included compelling new data on the broad health benefits of treating intestinal worm infections in young children.

4.4 Risk–benefit of co-administered drugs versus single drugs

Dr V. Pannikar shared his views on GPELF from the point of view of the Leprosy Programme and reviewed the profiles of the three drugs currently being used by the Global Programme (albendazole, DEC and ivermectin). Dr Pannikar pointed out the strengths and weaknesses of the different drugs and encouraged the LF community to increase its efforts to find more efficacious macrofilaricidal drugs, which could help achieve LF elimination sooner. He also pointed out the potential advantage of two-drug combinations over single-drug MDA in reducing the potential for development of drug resistance.

Dr Ottesen presented a review of the available data, both published and unpublished, on the antifilarial efficacy of albendazole, whether alone or in combination with DEC or ivermectin. The available data had been reviewed by a group drawn from within and outside the Secretariat, as previously recommended by TAG-ELF.

Dr Ottesen pointed out that, from a therapeutic perspective, there is excellent evidence that albendazole in high, prolonged doses is macrofilaricidal. The single, low dose of albendazole now administered in the Programme has an antifilarial effect that is additive with that of either DEC or ivermectin when the drugs are administered together. Some studies show this additive effect to be statistically significant and others show the trend only. Meta-analysis of these studies strengthens this overall trend.

Dr Ottesen made the point that, in assessing the value of albendazole it is equally important for GPELF to take a *programmatic* or *public health* view of the issue. A *programmatic* view would recognize issues of increased compliance (already demonstrated in populations receiving both albendazole and DEC rather than DEC alone), requiring fewer rounds of MDA and offering the theoretical advantage of slowing the development of drug resistance by administration of two drugs rather than a single drug. The *public health* view provides further argument for the two-drug regimen. Data presented by Dr Ottesen on the effect of the antifilarial regimens (albendazole and DEC, albendazole and ivermectin, and DEC alone) on soil-transmitted helminths, both in research studies and in real programme situations (after MDA under the Programme to Eliminate LF), showed the superiority of the co-administered regimens.

TAG-ELF thanked Dr Ottesen for his presentation. Dr J. Sokhey stated that India is currently reviewing these studies to decide whether to add albendazole to DEC for the entire country. A discussion followed on the desirability of additional studies to provide better understanding of the mechanisms of the action of albendazole and the added benefits of the two-drug combination in terms of interrupting transmission.

TAG-ELF recognized the added value of albendazole in GPELF and supported its continued use in national programmes.

4.5 Chemotherapy of individual microfilaria carriers

Dr V. Kumaraswami pointed out the discrepancy between the perspectives of programme managers and physicians practising in LF-endemic areas. The chemotherapeutic goal of the programme manager is to stop transmission, whereas doctors are charged with reversing or halting progression of disease. Many physicians in LF-endemic areas are unaware of recent studies showing that single-dose DEC is as effective in treating microfilaraemia as a 12-day course of the drug. Further, the last WHO guidelines developed by a scientific working group on treatment of LF were issued in 1992. These guidelines, now outdated, recommend a 12-day course of DEC – and most physicians thus continue to use it.

Dr Kumaraswami pointed out the desirability of harmonizing drug regimens for physician-based treatment of infected patients and programme-based MDA. He suggested that a single combined dose of DEC and albendazole every 6–12 months be recommended for treatment of individual patients with filarial infection, acknowledging that certain questions remained unanswered, such as the frequency of such treatment and the best methods to monitor the effectiveness of individual therapy. Dr Addiss pointed out that published work by Dr Gerusa Dreyer and colleagues in Brazil suggested that the addition of ivermectin to DEC resulted in lower macrofilaricidal efficacy than DEC alone. If albendazole were to have the same effect when co-administered with DEC, it would decrease the desirability of using the two-drug combination for individual patients. In field studies however, local adverse reactions following treatment with single-dose DEC and albendazole show that this drug regimen does have macrofilaricidal activity against *W. bancrofti*.

Professor Dato Dr C.P. Ramachandran pointed out that little is known about the effectiveness of DEC-fortified salt against the adult filarial worms and suggested that its use for treatment of individual patients with filarial infection be evaluated.

TAG-ELF noted the macrofilaricidal action of single-dose DEC and albendazole and acknowledged the substantial programmatic benefits of having identical drug treatment regimens for mass treatment and individual treatment of lymphatic filariasis, even though some controversy remains regarding the *most* effective drug regimen(s) for the individual patient.

Dr Kumaraswami pointed out the need for new WHO guidelines and for the inclusion in medical textbooks of recent advances in antifilarial chemotherapy. TAG-ELF agreed that this need is urgent, and urged WHO to summarize information on the effectiveness of single-dose treatment and disseminate it widely to physicians.

4.6 Updates on issues related to chemotherapy in Loa loa co-endemic areas

The occurrence, primarily in Cameroon, of "probable" or "possible" *L. loa* encephalopathy temporally related to treatment with Mectizan® (PLERM) has halted expansion of LF elimination in areas of Africa that are co-endemic for *W. bancrofti* and *L. loa*. PLERM occurs in persons with very high levels of *L. loa* microfilaraemia. Dr Ottesen presented the findings and recommendations of a workshop held in Whitehouse Station, NJ, USA on 27 October 2003 to discuss strategies to reduce the risk of PLERM. One objective of the meeting was to design studies to determine whether the risks of PLERM differ significantly between persons treated with ivermectin alone and those treated with combined ivermectin/albendazole. Factors that may increase the risk for PLERM include the rapidity of microfilarial death and alterations in drug metabolism or of the blood–brain barrier.

Three studies were recommended by the workshop participants: first, a placebo-controlled, hospital-based study to compare the safety and pharmacokinetics of ivermectin alone and combined ivermectin/albendazole in persons with relatively low levels of *L. loa* microfilaraemia (1000–5000/ml blood); second, a hospital-based study to assess the safety and efficacy of using 800 mg albendazole every 3 months to reduce the intensity of *L. loa* microfilaraemia in persons with high microfilaraemia (> 8000/ml blood); third, if the safety and efficacy of this regimen could be demonstrated, field studies of repeat-dose albendazole before MDA with ivermectin.

A potential site for these studies has been identified in Nigeria – the College of Medicine, University of Nigeria Teaching Hospital, Enugu. The studies would cost about US$ 150 000. Funding has not yet been identified.

TAG-ELF welcomed this progress in addressing the problem of mass treatment in areas co-endemic for loiasis and urged funding of the study.

5. When to stop MDA: monitoring criteria proposed by the Pacific Initiative for the Elimination of Lymphatic Filariasis

The Pacific Initiative for the Elimination of Lymphatic Filariasis, PacELF, is a regional collaborative approach to eliminating LF by 2010 and represents 22 Pacific island countries and territories. These countries are characterized by small populations, few clinical cases of filarial disease, and low microfilaraemia prevalence. *W. bancrofti* infection tends to occur focally and a variety of parasite–vector complexes can be found in the region.

Dr K. Ichimori presented an overview of the PacELF strategy and submitted it to TAG-ELF for consideration and suggestions. Briefly, the PacELF strategy for LF elimination is to conduct a baseline survey of antigenaemia to determine whether an area is endemic for filariasis, complete five annual rounds of MDA, and implement disability control activities, if needed. The baseline survey is used to categorize countries as non-endemic (no positives), partially endemic (≤1% antigenaemia prevalence) or endemic (>1% prevalence). One year after the fifth MDA round, a final assessment is done in all areas. Any sub-implementation unit (sub-district) that has >1% antigenaemia will be subjected to continual interventions such as vector control and MDA campaigns in geographical subunits. Finally, once antigenaemia prevalence is <1% in the sentinel sites, a transmission assessment will be done to determine the prevalence of antigenaemia in children born since the start of the programme. If the ICT prevalence in these children is >0.1%, targeted MDA and vector control are continued; if it is <0.1%, PacELF will consider LF to have been eliminated.

One of the major differences between the PacELF strategy and that of GPELF is reliance on ICT tests rather than microfilaraemia for all aspects of monitoring. This is largely because baseline microfilaraemia prevalence and density were so low in most places. In addition, it is PacELF policy to halt nationwide MDA campaigns after the fifth round and then conduct intensive surveys to determine which geographical areas (sub-IUs) require further intervention – such as "targeted" MDA campaigns, vector control, and perhaps DEC-fortified salt. In GPELF, annual treatment continues throughout the entire IU unless surveys following the fifth MDA indicate that transmission is likely to have been interrupted. Thus, the PacELF strategy relies more heavily on epidemiological assessment and monitoring to define smaller geographical areas that require further intervention to interrupt transmission (and conversely, to eliminate from further MDA areas that do not need it).

PacELF has developed two guidelines for programme managers that describe these strategies:

- the PacELF Handbook, which includes information on LF and on standardized methods and procedures for implementation, monitoring, and evaluation LF elimination in the PacELF region;
- the PacMAN (Pacific Monitoring and Assessment Network) book, a schematic country-by-country description of monitoring and evaluation of the PacELF programme.

TAG-ELF members congratulated Dr Ichimori on her presentation and the excellent work done by PacELF to mobilize the region for LF elimination. TAG-ELF members acknowledge that the PacELF situation represents a very important opportunity for testing tools and strategies to determine when LF transmission has been interrupted. TAG-ELF stressed the importance of careful, detailed epidemiological monitoring and urged Dr Ichimori to keep them informed about progress and "lessons learned" in the Pacific.

6. Pharmacovigilance on MDA with co-administered drugs

Dr M. Couper expressed concern that WHO has received few reports of serious adverse drug events (SAEs) from GPELF in recent years and that these frequently arrived several months after the event. She encouraged the Secretariat to urge programme managers to work more closely with national pharmacovigilance agencies and to report all SAEs to them.

Dr M. Bradley indicated that he was aware of four deaths associated with MDA during the past year and that data are not yet complete for all of these reports. One of these deaths apparently occurred when a child was forced by her guardian to take the drugs. Others involved asphyxiation from migrating *Ascaris* or chronic, underlying illnesses. Dr Bradley pointed out that, because very serious drug reaction attract publicity and have a negative impact on programme function, they generally come to the attention of the manager. Dr Twum-Danso stated that under-reporting of SAEs is believed to be a systemic problem in the onchocerciasis control programme too, and that enhanced surveillance for Mectizan®-related SAEs in areas co-endemic for loiasis, particularly the *L. loa* encephalopathy following treatment, has led to increased reporting of all adverse drug reactions in those countries, even mild reactions that might not otherwise have been reported.

TAG-ELF recognizes the need for enhanced surveillance and increased SAE reporting and urges that this issue be raised in meetings of regional PRGs and regional programme managers.

7. Research – report on the Lymphatic Filariasis Research Forum

Dr E. Ottesen presented key recommendations from the Lymphatic Filariasis Research Forum, held in Philadelphia, PA, USA, on 9–10 December 2003, immediately following the annual meeting of the American Society of Tropical Medicine and Hygiene. This forum brought together senior scientists involved in LF research to debate and develop research priorities. Forum participants made key recommendations for research and progress in 10 major areas: vector biology and control; pathogenesis; protective immunity; filarial infection and drug trials; treatment of filarial disease; chemotherapy; diagnostics; epidemiology and modelling; programme implementation; and programme monitoring.

A final draft of the document from this meeting should be available by August 2004 and will serve as a reference for a planned meeting of a scientific working group on LF later in 2004.

8. Results of completed, ongoing and future WHO/World Bank/UNDP Special Programme for Research and Training (TDR) research areas

Dr H. Remme presented the results of the following ongoing and recently completed studies supported by TDR:

- A community trial of annual mass treatment with DEC alone and with combined DEC/albendazole has been completed in Wardha, India, after three treatment rounds. Analysis is ongoing and results will be available soon.
- A transmission study in Pondicherry, India, that began in 1993 has shown that annual MDA with single drugs DEC or ivermectin has reduced prevalence of *W. bancrofti* infection in the mosquito to about 4%, a level that has remained relatively stable for the past 3 years, despite continued annual MDA. Treatment coverage and compliance was only 65% of the eligible population, a figure that is comparable to the coverage achieved by the regular control programme.
- A transmission study that began in Madurai, India, in 2001 seems to show enhanced microfilarial suppression in communities that received both albendazole and DEC compared with communities where only DEC was distributed. After two rounds of MDA, however, there was no significant difference in the reduction in transmission between the two groups of communities.
- Studies of *W. bancrofti* transmission in Africa, where the *Anopheles* mosquito is the vector, are taking place in Mali and Ghana, where combined ivermectin and albendazole are being used, and in Kenya, where DEC and albendazole are being tested.
- Studies in Orissa, Uttar Pradesh, and Tamil Nadu, India, are addressing the challenges of MDA in urban areas. Preliminary results indicate that compliance with treatment can be a major problem, with many people who receive the tablets not swallowing them.
- A study on community-based treatment of lymphoedema and adenolymphangitis in Mali showed that responsibility for home-based lymphoedema care is considered the domain of the family rather than of the entire community.
- A study of community-based treatment of lymphoedema and adenolymphangitis in Yola, Nigeria, yielded similar results.
- A regional workshop on disability prevention in Sri Lanka identified key operational research issues.
- Good progress has been made in validating RAPLOA, a technique for rapid assessment of areas with intense transmission of *Loa loa*, in which persons are at risk for encephalopathy following mass treatment with ivermectin. The final validation of RAPLOA was to be completed by March 2003 and an extension of the environmental risk model by April 2004.
- A large study, under way in nine sites, is exploring integration of community-directed treatment with ivermectin (CDTI) with other public health programmes at the community level.

Dr Remme noted that, while overall TDR funding was increasing, those increases were in specified contributions. Funding for TDR LF research comes from unspecified contributions and lack of these funds is compromising additional research.

TAG-ELF thanked Dr Remme for his presentation of the exciting TDR research that is addressing key issues for the Global Programme. Considerable discussion followed regarding

the challenges to interrupting transmission of *W. bancrofti* in the ongoing transmission studies in India, particularly in Pondicherry. Low levels of compliance were a concern to TAG-ELF members, highlighting the need to identify ways to improve coverage and compliance and underscoring the desirability of directly observed therapy.

9. Issues related to meeting the challenge of scaling up MDA to 350 million by 2005

Dr Zagaria presented data on progress in and challenges to scaling up the programme to reach the goals set during the last meeting of the Global Alliance in New Delhi, May 2002. The global targets set for the years 2004 and 2005 were 230 and 350 million people covered respectively. If persons in India who are treated with DEC alone are included in the totals, then – assuming that India proceeds with its plans for a nationwide MDA in June of this year – the targets for 2004 and 2005 would be 540 million and 605 million persons, respectively, i.e. considerably greater than the targets set in New Delhi. When all countries except India are considered, the New Delhi targets for 2004 and 2005 are 129 million and 249 million people, respectively, while current projections are for 115 million and 160 million for 2004 and 2005, respectively, i.e. less than the New Delhi targets.

Current priorities for GPELF include:

- identifying appropriate types of advocacy for LF elimination in the context of the neglected diseases initiative;
- scaling up MDA campaigns within countries where they have already started and along cross-border foci of transmission; and
- identifying ways to build partnerships at the national level to support mass treatment interventions (including for LF).

10. Strategies for implementing prevention of disability caused by LF

Dr P. Brantus presented information on progress in LF disability prevention, which is built on three components – chronic disease care, community home-based care, and a global approach. The chronic disease model stresses six areas of intervention – the health system, the delivery system, decision support (guidelines for health workers), clinical information systems, self-management, and community services. The global approach emphasizes that disability results from the interaction of different factors, all of which need to be considered, and that care of the disabled patient should include medical, psychological, social, economic, and environmental components.

A discussion followed about how best to implement disability prevention programmes and whether the global approach is feasible in all LF-endemic areas. Dr Sokhey suggested that LF programmes are not equipped to provide economic support or environmental change and should focus on basic lymphoedema management and surgery for hydrocele. She stressed the role of the existing health system. Dr Henderson suggested that implementation of programmes in the field through pilot projects will help to identify what works best. Several suggestions were made for improving the draft manual for district medical officers and making it more practical. Dr Gyapong suggested that a working group of TAG-ELF, similar in function to the monitoring and evaluation working group, be created to focus on disability prevention. Professor Dato Dr C.P. Ramachandran reminded the group that filariasis disability is minimal in many LF-endemic areas, especially in the Mekong-Plus countries.

Dr Zagaria reported that WHO and country programme managers have in fact implemented programmes in the field, are gaining valuable experience through focus groups and pretesting of training materials, and are learning which approaches work best.

TAG-ELF thanked Dr Brantus for his report and reiterated the importance of disability prevention in GPELF.

11. Elements for effective social mobilization and communication for achieving high drug coverage and needs for GPELF

Dr Baru presented the results of a survey of programme managers and her evaluation of social mobilization for LF in Sri Lanka. The survey indicated that all programme managers were aware of the importance of social mobilization for achieving high MDA drug coverage, but that few of them felt themselves to be adequately trained in how best to develop and implement social mobilization activities.

Her visit to Sri Lanka focused on understanding how social mobilization is achieved in the context of a filariasis elimination programme, taking into account the input required by the health system and volunteers – which are too often ignored by outside donors.

Social mobilization is traditionally seen as printing materials for information, education, and communication, or as "knowledge, attitude and practice" surveys, but Dr Baru stressed the need to assess the role of the health system as well. The Communications for Behavioural Impact (COMBI) plan used in Sri Lanka was developed in collaboration with WHO and adapted to the Sri Lankan situation. The overall COMBI package is quite expensive but does improve coverage. The health system in Sri Lanka bore many of the programme costs, not just for the cost of posters and advertising. There is a need to streamline costs and identify components of COMBI that work best for different situations.

TAG-ELF thanked Dr Baru for her presentation and acknowledged the need for increased attention to social mobilization and for increased operational research to provide better understanding of the social mobilization process, its costs and its benefits.

12. Regional operational issues and proposed operational research studies for finding locally relevant solutions

TAG-ELF acknowledged receipt of copies of two proposals submitted to the Gates Grant Review Committee, both on disability prevention. One proposal establishes disability prevention pilot projects with technical support from WHO in Geneva and the other establishes a regional network in west Africa for training and support in hydrocele surgery. TAG-ELF thanked the Chairman for bringing these activities to the attention of TAG-ELF and asked him to identify the proposals that are most appropriate for inclusion in the meeting documents for future TAG-ELF meetings.

Regional PRG members and WHO representatives presented their priorities for LF operational research. For the African region, these include:

- drug distribution strategies for urban and special populations;
- social mobilization strategies;

- strategies for "operationalizing" synergy with other public health programmes such as malaria and intestinal helminth control, especially for purposes of advocacy; and
- studies of social and economic impact.

For the PacELF and Mekong-Plus regions, operational research priorities include:

- validation and evaluation of a rapid diagnostic test for *Brugia malayi* infection to determine its usefulness for epidemiological mapping;
- development and testing of criteria for elimination of *B. malayi* transmission;
- dynamics of antigenaemia following cessation of MDA campaigns;
- levels of drug coverage necessary to achieve interruption of transmission;
- modification of COMBI to make it more cost-effective;
- evaluation of COMBI to determine its impact;
- evaluation of the effect of larval source reduction on LF transmission, particularly with *Aedes polynesiensis*;
- assessment of the effects of bednets on LF transmission in areas where *A. polynesiensis* is the vector;
- evaluation of control measures for *Culex* in the Pacific; and
- risk factors for non-compliance with MDA.

Operational research issues for the American region include:

- assessment of drug coverage in areas using DEC-fortified salt; and
- studies of programme costs and cost-effectiveness.

13. Future working arrangements for TAG-ELF

In deciding how to improve the effectiveness and impact of TAG-ELF activities within GPELF, TAG-ELF members discussed whether their meetings should be held annually or less frequently intervals; opinion was divided. Most members tended to prefer annual meetings because of the number of critical technical issues still to be dealt with. A suggestion was made that fewer issues should be addressed, but in greater depth, at future TAG-ELF meetings. Dr Zagaria noted that several missions to assist national programmes have been undertaken by TAG-ELF members during the past two years, and that these have been particularly helpful. Closer links between TAG-ELF and national programmes are desirable.

Several TAG-ELF members expressed a desire and willingness to be included by the Secretariat on specific projects or missions. Dr Gyapong noted how well the monitoring and evaluation working group has functioned since it was created following TAG-ELF-2, and he recommended that other TAG-ELF working groups be created. In particular, he suggested working groups on disability prevention and social mobilization. Dr Dadzie was asked to discuss these suggestions with the Secretariat.

14. Conclusions and recommendations

14.1 General

TAG-ELF was impressed with the wealth of data now being submitted by national programmes that revealed the substantial progress being achieved in GPELF. Members were particularly impressed with the trends in microfilaria reduction in most programmes, which

were consistent with expected results. Discussion emphasized the following issues as requiring urgent attention:

- scarcity of funds, in some instances jeopardizing the ability to continue operations in areas that have already started MDA rounds;
- need to coordinate LF elimination efforts more closely with those related to control of other "neglected diseases";
- need to support MDA with appropriate social mobilization to attain satisfactory levels of drug distribution and drug ingestion;
- need for and difficulties of mounting home-based care programmes for lymphoedema management and for achieving higher coverage and better quality surgery for hydrocele;
- need for more extensive field experience to provide greater confidence in the steps required before terminating MDA; and
- need for support of an intensified programme of basic and applied research.

TAG-ELF took note of the materials referred to it by the Gates Grant Review Committee. It suggests that the TAG-ELF Chair, who attends the Committee meetings, advise on which documents would be most appropriate for future review.

TAG-ELF welcomes the actions taken by the Secretariat in pursuing the recommendations made at TAG-ELF-4 in March 2003.

14.2 Monitoring and evaluation

TAG-ELF noted that the reduction in microfilaraemia levels observed in most programmes was consistent with the expected results and supported the current strategies being applied by the programme. TAG-ELF suggested that the revised monitoring and evaluation guidelines emphasize that the mid-term assessment should be done *11 months after* the latest MDA and that reports on microfilarial densities being made to national and global levels include the volume of blood that was examined.

TAG-ELF appreciated the efforts of the Secretariat in translating the technical work done by the monitoring and evaluation working group into a form more appropriate for national programme managers, in accordance with recommendations from TAG-ELF-4.

14.2.1 Epidemiological modeling

TAG-ELF welcomed the work done to develop the LYMFASIM model in response to the recommendation from TAG-ELF-4. The model now requires further development, with an emphasis on adaptation to a variety of local and regional situations, for use in programmatic decision-making. TAG-ELF encouraged the mobilization of resources to bring this important work to a stage at which it can be a helpful tool for programme managers.

14.2.2 Monitoring and evaluation – working group report

TAG-ELF reviewed the report on the activities of the monitoring and evaluation working group during 2003 and noted that significant progress had been made. It recommended that the Programme and the monitoring and evaluation working group focus urgent attention on the following activities:

- quality assurance of the monitoring and evaluation data collected and processed by national programmes;

- testing currently recommended strategies for surveillance (both post-MDA and so-called "background" surveillance), for deciding when to stop MDA, and for verification of the absence of transmission;
- comparing the utility of tests based on filarial antigen, antibody, DNA and microfilaria detection to measure progress in lymphatic filariasis elimination;
- testing proposed indicators for morbidity management;
- developing guidelines for monitoring and evaluating LF elimination in situations where these activities are coordinated ("integrated") with other public health programmes (e.g. onchocerciasis, schistosomiasis, intestinal helminths, malaria, trachoma, vector control programmes).

14.2.3 PacELF

PacELF is the most successful and advanced of all regional programmes. Many Pacific island countries and territories have already completed three or more rounds of MDA and are now facing decisions on stopping further MDA campaigns. A variety of geographical and epidemiological factors, including small and widely dispersed island populations, frequent travel between islands, and mosquito vectors of high efficiency, pose special challenges for lymphatic filariasis elimination in the Pacific region. PacELF has responded to these challenges, in part, by adapting the GPELF guidelines.

TAG-ELF commended PacELF on the progress achieved. Recognizing the risk of recrudescence of Microfilaraemia, which has been such an unpleasant surprise in the past, TAG-ELF endorsed the intensive monitoring and evaluation now being planned in PacELF countries, especially in areas where supplemental efforts such as vector control, geographically limited MDAs, or DEC salt are required to interrupt transmission. The results of monitoring these activities will be extremely useful to GPELF.

14.2.4 Verifying absence of transmission

TAG-ELF welcomed the news that several countries, including China, Costa Rica, Suriname, and Trinidad and Tobago, have conducted surveys or collected data suggesting that filariasis transmission has been interrupted. It requested WHO and the monitoring and evaluation working group to offer guidance and technical support to these countries to help them take the actions necessary to verify the absence of transmission.

14.3 Chemotherapy

TAG-ELF welcomed the review of evidence on the added antifilarial value of albendazole when co-administered with either DEC or ivermectin. Most studies have revealed a positive chemotherapeutic impact. In addition, a number of countries have reported increased compliance with ingestion of DEC when the anthelminthic impact of albendazole is observed. This impact, in itself, makes a major health contribution by reducing anaemia, raising levels of vitamin A, and promoting growth in helminth-infected children. A theoretical advantage to using a two-drug rather than a single-drug regimen is the slowing down of the development of drug resistance.

TAG-ELF recognizes the proven added value of albendazole in GPELF and strongly supports its continued administration by national programmes.

14.3.1 Treatment of young children

The use of albendazole in children over 1 year of age but too young to be included in MDA for LF poses a variety of technical, financial and operational issues. TAG-ELF encourages operational research to further clarify the benefits and difficulties related to extending coverage with albendazole to these younger children.

14.3.2 Chemotherapy for individual microfilaria carriers

Recent data indicate that a single dose of DEC, repeated at intervals of 6–12 months, is as effective as a 12-day course of the drug for reducing microfilaraemia and for killing the adult worm. Further, albendazole in repeated doses has been shown to have a macrofilaricidal effect against *W. bancrofti*. TAG-ELF suggests that the Secretariat disseminate the relevant information widely to programme managers and encourage the updating of textbooks and other reference materials.

14.3.3 Safety

TAG-ELF noted that the number of reports of serious adverse events reported to WHO, pharmacovigilance centres, GlaxoSmithKline or the Mectizan® Donation Program is less than expected, given that millions of individuals have received these regimens. Even in the light of the excellent safety record of DEC, ivermectin, and albendazole, there is a clear need for further education in this area to improve the mechanism for reporting adverse experiences. Communication with pharmacovigilance centres in countries they have been established should be improved. All serious adverse experiences should be reported immediately to the national health authorities concerned and reports should also be forwarded to WHO, GlaxoSmithKline, Merck & Co., Inc. and the Mectizan® Donation Program.

Criteria for exclusion from MDA for LF are based on age (or height or weight for ivermectin), pregnancy, and history of allergic reaction. Ivermectin is not given to lactating women within one week of delivery. As a matter of extreme precaution, administration of the drugs to persons who are seriously ill from an acute or chronic disease should be avoided to reduce the risk of temporal severe events. Patients should be reassured that antifilarial therapy is safe even if they are taking drugs for chronic conditions such as diabetes or hypertension, but drug distributors must respect the right of patients to decline treatment if they so choose. To ensure sustained high levels of compliance, the intake of the drugs should, ideally, be directly observed.

14.4 Strategic issues regarding scaling up of GPELF

Most LF-endemic countries have now begun MDA programmes and Guyana has begun a programme using DEC-, iodized and fluoride-fortified salt. In the African region, however, 30 of 39 endemic countries have yet to begin MDA. Countries of the Western Pacific region are the most advanced, since several are approaching the decision on whether it is appropriate for them to stop MDA.

Unfortunately, an unanticipated lack of financial resources at the global and national levels is now threatening further programme expansion – and even the continuation of MDA in areas where it has already started. The problem is most acute in the African region, but progress in all other areas is also affected. Priority for the use of available resources must therefore be given to sustaining existing activities and, for new areas, cross-border foci of filariasis transmission. Mobilization of additional resources is now a critical need. The addition of new

countries should be considered only when there is evidence of adequate support, either from the country itself or from external sources. Success in mobilizing additional resources is most likely if filariasis elimination efforts are seen to be an integral part of national disease prevention and control and are coordinated with other programmes using MDA as their primary control strategy, as epidemiologically appropriate. Such programmes include malaria, onchocerciasis, schistosomiasis, and trachoma control.

TAG-ELF supports these priorities and strategies. It notes that the goal of LF elimination as a public health problem by 2020 and the fact that control operations can cease when the transmission of LF ceases creates both opportunities and constraints when coordinating with programmes that do not have an elimination goal.

14.4.1 Programme synergy

TAG-ELF welcomes progress being made to promote synergies between LF elimination and soil-transmitted helminth control programmes in line with the recommendation of TAG-ELF-4. Furthering such coordination is seen as critical for mobilizing additional resources and for augmenting both health benefits and economic efficiency, and TAG-ELF urges increased efforts to achieve this. It recommends that WHO:

- give more active support for the joint planning, monitoring, and evaluation of national multi-disease initiatives (including the neglected diseases initiative);
- work to harmonize, and eventually consolidate, the several disease-specific "alliance" and "partner" groups currently operating at international level, initially by promoting cross-participation in the various meetings; and
- prepare or commission and widely disseminate dossiers providing evidence of the health and economic advantages of multi- as opposed to single-disease control efforts, focusing especially on programmes using MDA.

It also recommends that:

- TAG-ELF include an agenda item to review progress on multi-disease coordination in its future meetings and invite representatives from other disease control initiatives to participate;
- the TAG-ELF Chair, or his representative, attend technical and support-group/alliance meetings concerned with other diseases/deficiencies.

14.4.2 Loa loa

TAG-ELF was pleased to see activity aimed at resolving the challenge of safely treating LF in areas endemic for loiasis. It strongly endorses the implementation of protocols to test the safety and pharmacokinetics of albendazole co-administered with ivermectin and to examine the possible use of albendazole as pretreatment to reduce *Loa* microfilaraemia to levels below the "safety threshold" of 8000/ml, allowing ivermectin – alone or together with albendazole – to be safely used for LF elimination. TAG-ELF encourages TDR and other potential funding agencies to support this proposal.

14.5 Social mobilization

TAG-ELF noted the effectiveness of social mobilization using COMBI in several countries and recognized that social mobilization is critical for sustaining and improving coverage and compliance with MDA. Social mobilization must be part of the planning and evaluation

process of the programme at national and subnational levels. TAG-ELF recommends that technical support for social mobilization be made available to national programmes and that operational research be done to identify the most cost-effective components of COMBI in different settings.

14.6 Disability prevention

TAG-ELF was encouraged by the work being done to initiate LF disability prevention programmes although it recognized the substantial challenges of achieving adequate coverage. It welcomed the work done, in response to the TAG-ELF-4 recommendation, on developing indicators for monitoring lymphoedema management and hydrocele surgery programmes to supplement those adopted for global use in 2003. It recommended that emphasis now be placed on working with programme managers and other interested parties at national and local levels so that home care and surgery programmes of high quality can be initiated and monitored. It is hoped that such initial efforts will generate the experience, expertise and enthusiasm that will help to extend these efforts to all of those in need.

14.7 Research

TAG-ELF welcomed the progress made since its last meeting to define the research agenda in support of GPELF.

TAG-ELF welcomed plans by TDR to convene a scientific working group in 2004 to finalize a strategic plan for filariasis research, and expressed hope that implementation of this plan would result in a much stronger (and better-funded) research community focusing on the specific needs of GPELF.

TAG-ELF expressed concern about the urgent need for operational research at the global, regional and national levels and reviewed research priorities for each region of the Programme, which also need urgent support.

TAG-ELF noted with interest the preliminary results from ongoing TDR-supported studies of filariasis transmission in India. The studies indicate that, with coverage of 65% of the eligible population, five years of annual MDA with either DEC alone or ivermectin alone may not be sufficient to interrupt transmission of *W. bancrofti*. TAG-ELF eagerly awaits preliminary results of TDR-supported transmission studies in Africa and updated model predictions of elimination strategies.

Fifth Meeting of the Technical Advisory Group on the Global Elimination of Lymphatic Filariasis (TAG-ELF)
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Fifth Meeting of the Technical Advisory Group on the Global Elimination of Lymphatic Filariasis (TAG-ELF)
3–6 February 2004, Geneva, Switzerland

Agenda

Opening **14:30 on 3 February and 09:00 on 4–6 February**

Coffee 10:30 – 10:50
Lunch break 12:30 – 14:00
Coffee 15:30 – 15:50

Adjourn **17:30**

Tuesday, 3 February 2004

1.	*Opening*	
	1.1 Welcome and introduction	Endo
	1.2 TAG-ELF and its function	Zagaria
	1.3 Adoption of agenda and meeting structure	Dadzie
	1.4 Administrative matters	Faizi
2.	*Global Programme update*	Biswas, Rio, Yactayo
	Remarks from the RPRG members and Regional Focal points	Ramachandran, Ismail, Gyapong, Hussain, Persaud
	Report of the Chairman, TAG-ELF	Dadzie
	Report of the Chair, Task Force for Communications, GAELF	Molyneux

Wednesday, 4 February 2004

A. Technical issues

3.	*Monitoring and evaluation*	
	3.1 Report of the monitoring and evaluation working group	Ottesen
	3.2 Field module on monitoring PELF	Yactayo
	3.3 Use of simulation models in programmatic decisions – status of tools available, potential areas of use and their limitations	Habbema
	3.4 Indicators for monitoring disability prevention	Addiss
4.	*Chemotherapy*	
	4.1 Impact of mass drug co-administration on reducing microfilaraemia	Yactayo
	4.2 Age groups escape chemotherapy under 90 cm of height	Gyapong
	4.3 Benefit of chemotherapy in the 1 to 5 years age group	Savioli
	4.4 Risk–benefit of co-administered drugs compared with single drugs in mass drug administration campaigns	Pannikar & Ottesen

Thursday 5 February 2004

4.5 Chemotherapy of individual microfilaria carriers	Kumaraswami
4.6 Update on issues related to chemotherapy in Loa co-endemic areas	Lazdins-Helds, Ottesen
5. *When to stop MDA: Monitoring criteria proposed by PacELF*	Ichimori
6. *Comment on the ongoing pharmacovigilance on MDA with co-administered drugs*	Couper
7. *Research*	
7.1 Report on the LF Research Forum	Ottesen
8. *Review of completed, ongoing and future TDR research areas*	Remme

Friday 6 February 2004

B. Strategic issues regarding scaling-up of Global Programme to Eliminate Lymphatic Filariasis

9. *Issues related to meeting the challenge of scaling up MDA to 350 million by 2005*	Zagaria
10. *Strategies for implementing prevention of disability caused by LF*	Rio/Brantus
11. *Elements for effective social mobilization and communication for achieving high drug coverage and needs for GPELF*	Baru
12. *Regional operational issues and proposed operational research studies for finding locally relevant solutions*	Chairs of regional PRGs, and regional focal points
13. *Future working arrangements for TAG-ELF*	Dadzie
14. *Finalization of conclusions and recommendations*	

The process of social mobilization for the filariasis elimination programme in Sri Lanka

Summary of report submitted to the Technical Advisory Group on the Global Elimination of Lymphatic Filariasis WHO, Geneva, January 2004

Dr Rama V. Baru. Associate Professor, Centre of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi, and Dr Meena Gopal Assistant Professor, SNDT University, Mumbai

Summary of findings

Inputs

1. There was unanimous opinion among the Directorate, regional medical officers and medical officers of health regarding the need for a social mobilization programme. They feel that it has contributed to improved coverage in 2002 and 2003. This is supported with the increase in coverage from 2002 to 2003 across the districts.

2. The mobilization process began, on an average, two months before the appointed day. The information dissemination began at least two months prior to the day designated for MDA. This was done by the programme-by sending a written circular to all regional medical officers and the Ministry of Health. The newspapers carried articles and advertisements and there were TV advertisements.

3. The strategy for social mobilization was formulated at the central level in consultation with the regional medical officers. At the provincial level a strategy plan was developed in consultation with the medical officers of Ministry of Health areas. The medical officers, in turn, had meetings with the public Health nurses, public health inspectors and public health midwives regarding social mobilization for LF day. The public health staff took help from the *grama sevikas* in order to select the volunteers from the community. The training curriculum, duration and materials were developed at the centre in consultation with the Health Education Bureau. In the perceptions of the Director, regional medical officer, medical officers and public health staff, there was unanimity about the central role played by the volunteers at the community level in social mobilization. They were of the opinion that the community volunteers and public health midwives were the backbone for the social mobilization programme. Much of the energy of regional medical officers went into motivating the public health staff to identify suitable persons to be volunteers and the criteria for selection of volunteers was based on regional requirements. On an average there was one volunteer per 50 households. This number varied depending on availability of volunteers. Describing the process of selection of volunteers in a Ministry of Health area in Puttlam district, the medical officer said that the public health inspectors spoke to the *grama sevikas* and asked each to locate at least 6–10 volunteers. All the regional medical officers felt that it was definitely easier to get volunteers in the rural as compared to urban areas. The level of motivation, commitment and willingness to give time for voluntary work seems to be less in urban as compared to rural areas. In the Sri Lankan situation none of the volunteers were paid an honorarium but were given certificates for participating in the programme, souvenirs (t-shirts, badges and bags) and some refreshment on the day of the distribution.

4. All areas had conducted training of FPAs for a day and they were normally trained by the public health personnel who received training from the regional medical officers. Generally the latter felt that the training given to volunteers was adequate but a few of them were of the opinion that in some situations they were unable to answer queries regarding contraindications with long-term use of drugs for hypertension, diabetes etc. Some districts have experimented with nursing trainees as volunteers in order to promote better drug acceptance from the community.

5. The IEC campaign was mainly conducted through the health services infrastructure and the school health programme. The communication strategy was centrally directed. The advertising in the TV and print media and the designing of the logo for the programme was contracted out to a private advertising agency. In 2002 the programme spent a good deal of their budget on advertising but this amount was reduced during 2003 marginally. They felt that print and TV advertisements reach only a small section of the population especially in rural areas. Other inputs like using a public announcement system, banners, leaflets and using the health education units in hospitals were effective. Interestingly the use of posters was reduced because it was not seen as a very effective medium.

6. The regional medical officers were of the opinion that the availability of functioning health services, the paramedical staff, availability of drugs and transport facilities are important factors that affect coverage. Since the social mobilization programme is so dependent on the national programme and the health services infrastructure, the costing exercise becomes a complex one. There are some direct costs to COMBI in terms of production of materials; training of volunteers; TV and media advertising etc. The indirect costs are the use of the health services infrastructure and programme expenditure. In a rough calculation the programme director estimates that the programme is spending as much as what the direct costs incurred for social mobilization. They are dependent on the funds from WHO, Liverpool School of Tropical Medicine and GlaxoSmithKline for supporting this activity. They were very clear that without this the social mobilization component would collapse.

7. There was unanimity about the need for differential strategies for social mobilization in rural and urban areas. The present strategy was fairly suitable for rural areas but it does not seem to work as effectively for urban areas. This was expressed by medical officers of Ministry of Health areas who said that it was far more difficult to elicit cooperation from people residing in towns for accepting drugs from volunteers. They did not want to take the drug because "doctors were not administering the drugs". An additional reason for a differential strategy is due to the size and social composition of urban communities. The public health staff is able to work effectively in slum and lower middle class localities. They are however unable to motivate middle and upper class localities to accept and later consume the drug.

8. The mode of drug delivery seems to have an effect on coverage. This has been corroborated by an evaluation study and also on the basis of our interviews. The house-to-house distribution by volunteers seems to ensure better coverage rather than people collecting drugs from a depot or clinic. The regional medical officers pointed out that there needs to be a clear message to be given about the availability and mode of distribution. There was some confusion in Colombo city when people were sensitised and told that they volunteers would come and give drugs on a specific day. Due to problems with getting volunteers, the programme decided to set up drug distribution centres. This resulted in confusion and many did not take the drug. The additional input which contributed to the improved coverage was the information that communities received

regarding mopping up period of two weeks that ensured that people who had not received drugs could do so for two weeks following it. Supervised swallowing of the drug was tried in 2002 but was not done in 2003. This was because supervised consumption is time consuming and also because consumption of the drug after meals reduces side effects. Since most people preferred to take it after their dinner supervised treatment was not feasible.

Issues for social mobilization for GPELF

The qualitative study of the process of social mobilization in Sri Lanka brings forth the following issues:

1. Social mobilization is a labour- and capital-intensive process. It requires investment and commitment both in terms of finances and human input for sustaining and improving coverage and compliance of DEC.

2. Social mobilization is a very important and necessary input in the case of LF elimination programmes since in almost all endemic countries filariasis is not seen as a killer and hence not a "priority disease". It also covers the entire population and the risk of getting filaria is not a 'felt need' of the people. The extent and intensity of the programme is dependent on whether the programme managers are convinced about its contribution for improvement of coverage.

3. Social mobilization is a complex process where the programme, health services organisation, health personnel and strategies for mobilization and communication interact to influence and change behaviour of people.

4. While creating awareness regarding the disease and ensuring that people accept the drug has been achieved, the real challenge is how to improve compliance levels.

5. The process, content and adequacy of training input needs to be reviewed periodically and could be a part of an evaluation process of social mobilization. This needs to be assessed at all levels of the personnel and especially of volunteers and public health staff who interact directly with communities.

6. A process of evaluation needs to be formally built into national programmes, which would help to objectively assess the inputs and make modifications in the subsequent rounds. This would include organizational inputs, human resources, financial resources, drug availability, training inputs etc.

7. The strategies for social mobilization will vary between rural and urban areas. The experience of Sri Lanka with urban social mobilization clearly shows that there are both sociological and programmatic challenges while dealing with the urban situation. Experiences and strategies employed in programmes like dengue and immunisation could be modified and adapted for the filariasis programme as well.

8. The Sri Lankan programme has chosen a labour intensive approach to social mobilization. The cost factor seems to be an important one for choosing this path since volunteers are not paid honorariums therefore there is very little "direct cost" to the programme. In other countries where volunteers are paid honorariums the cost to the programme will be quite substantial.

9. Strategies like using the media, hiring advertising agencies etc. were not seen to be

financially sustainable given the present availability of financial resources.

10. The international support from both the Global Alliance and the WHO are critical for the social mobilization and communication inputs in the MDA. The amount may require enhancement if more costly strategies like intensive media campaign has to be undertaken. The role of the visual and print media would be an extremely important component for social mobilization in the urban context.

11. The role and contribution of public–private partnerships is **not** very promising as a major source of additional funding. They have performed a supportive role but cannot be seen as a major player for financing social mobilization.

12. There is a need to encourage national programmes to take stock of the social mobilization process in their respective countries within the conceptual framework suggested by this exercise. There is also a need to document the process in each country and build an evaluation component within the respective programme. This is valuable for each country programme as well as for comparisons across countries.