Policy and technical topics:

Selected neglected tropical diseases targeted for elimination: kala-azar, leprosy, yaws, filariasis and schistosomiasis

Diseases targeted for elimination in the WHO South-East Asia Region include kala-azar (visceral leishmaniasis), leprosy, yaws lymphatic filariasis, and schistosomiasis. This is a group of diseases that falls under the title of neglected tropical diseases (NTD) affecting the poorest communities and associated with a very high socioeconomic burden. Member States have endorsed several resolutions, including World Health Assembly resolution WHA66.12 on Neglected Tropical Diseases calling for control, elimination or eradication of these diseases. There is strong donor support and commitment on this, following the London Declaration on Neglected Tropical Diseases.

Elimination of targeted diseases is a regional priority and one of the seven flagship priorities of the Regional Office.

This working paper, focusing on five major diseases – kala-azar (visceral leishmaniasis), leprosy, yaws lymphatic filariasis, and schistosomiasis – was submitted to the High-Level Preparatory (HLP) Meeting for its review and recommendations. The recommendations made by the HLP meeting for consideration to the Sixty-eighth Session of the Regional Committee are:

**Actions by Member States**

1. Sustain strong political commitment and programmatic activities to accelerate progress in eliminating the targeted diseases.
2. Strengthen monitoring and evaluation and improve reporting to WHO.

**Actions by WHO**

1. Continue providing technical support to the Member States to eliminate targeted diseases.
2. Organize an experience-sharing meeting in the Region.
4. The title of this working paper should be amended to “Selected neglected tropical diseases targeted for elimination: kala-azar, leprosy, yaws, filariasis, and schistosomiasis” before submission to the Regional Committee.
Introduction

1. Neglected Tropical Diseases (NTD), a group of infectious diseases involving a variety of pathogens and different modes of transmission, affects the poorest communities of the developing world. These diseases are categorized as neglected because they have largely been eliminated and forgotten in the developed world, but affect the poorest of the poor in many parts of the world. Some of these diseases are fatal if not treated, while others leave the affected populations disfigured and disabled, leading to discrimination and high stigma often associated with social isolation, pushing the affected people further into poverty.

2. There has been renewed interest and commitment on NTD from several donors and partners with the recognition of the high socioeconomic burden associated with these diseases and the fact that most of them can be eliminated or eradicated with relatively little investment. World Health Assembly Resolution WHA66.12 on Neglected Tropical Diseases and the London Declaration on Neglected Tropical Diseases have paved the way for most of the current investment and support that Member States are receiving towards the elimination and eradication of NTD.

3. The diseases targeted for elimination from the WHO South-East Asia Region include: lymphatic filariasis (LF), kala-azar (visceral leishmaniasis), yaws, leprosy and schistosomiasis. Elimination and eradication of the targeted diseases is one of the seven flagship priorities of WHO South-East Asia Region.

Regional situation and response

4. LF is targeted for elimination as a public health problem, defined as reduction of the microfilaraemia (Mf) rate to less than 1% in all areas of an endemic country by 2020. The global strategy recommended by WHO to eliminate LF is interruption of transmission through annual treatment of the entire population in the LF-endemic areas with two drugs, albendazole and diethylcarbamazine (DEC), continued for a minimum of five consecutive years. The drugs are supplied free through WHO to endemic countries. Since most of the public health problems associated with LF are due to the chronicity of the disease and disfigurement and disability due to hydrocele and lymphoedema, appropriate care and management of morbidity and disability prevention (MMDP) is an important pillar of the LF elimination programme.

5. Nine countries in the Region, with the exception of Bhutan and the Democratic People’s Republic of Korea, are endemic for LF. All three parasites are found in the Region, though *W. bancrofti* accounts for around 95% of the cases. Half of the infected people in the world (60 million) reside in the Region and about 871 million people in the Region (63% of the global population at risk) are at risk of LF.

6. Maldives, Sri Lanka and Thailand have achieved the disease elimination target and are continuing with post-mass drug administration (MDA) surveillance. Bangladesh, India and Nepal have achieved 100% geographic coverage on MDA and are significantly scaling it down, since several endemic districts have achieved the elimination target and are being evaluated to confirm interruption of transmission by transmission assessment surveys (TAS). Bangladesh has conducted TAS in all 19 districts that were put on MDA and after completing the first TAS, 18 districts have stopped preventive chemotherapy. TAS are planned in 86 districts of India in
2015, with 49 districts already having completed the first TAS. Twenty out of the 61 endemic districts in Nepal have completed the first TAS and 11 more districts are scheduled to undergo the survey in 2015. Indonesia, Myanmar and Timor-Leste are yet to achieve 100% geographic coverage on MDA, though five out of the 45 endemic districts in Myanmar and 41 out of the 241 endemic districts in Indonesia have completed the first TAS. In Myanmar, MDA has not started in seven endemic districts; while coverage is low in Indonesia. MDA has been discontinued in Timor-Leste since 2007. Indonesia is planning for a significant scale-up of LF MDA in 2015 and is moving towards a national campaign approach, covering 130 districts in 2015 and all endemic districts in 2016. Timor-Leste is also planning to restart MDA in 2015 with the aim of reaching all 13 districts in 2015.

7. Recent surveys show two small foci of ongoing LF transmission in the district of Galle in Sri Lanka where interruption of transmission was demonstrated earlier. Likewise, several districts in Indonesia are showing ongoing transmission in the second and third TAS. Therefore, the threat of re-emergence of LF in endemic areas that have already demonstrated interruption of transmission is a cause for concern. This calls for stronger post MDA surveillance, early detection and provision of appropriate treatment where required.

8. Over 147 million people in the Region are estimated to be at risk of kala-azar, also known as visceral leishmaniasis, with an estimated 100 000 annual cases (Figure 1). The socioeconomic cost and loss of productivity due to kala-azar are very high and an estimated 400 000 disability-adjusted life years (DALYs) are lost in the Region. The disease is endemic in parts of Bangladesh, India and Nepal with sporadic cases reported from Bhutan and Thailand. Though India reports the highest number of cases, kala-azar is limited to four states in India with a majority of cases reported from a single state. WHO recommends liposomal amphotericin B (LAMB) as the first line of treatment and supplies these drugs free to endemic countries in the Region. Timely detection, diagnosis and treatment of post kala-azar dermal leishmaniasis (PKDL) is more complex and takes longer, and therefore, is a challenge for disease elimination.

**Figure 1:** Kala-azar cases and deaths in SEA Region, 2000–2014*
9. A multilateral memorandum of understanding (MoU) for the elimination of kala-azar from the Region has been signed between Bangladesh, Bhutan, India, Nepal, Thailand and the WHO Regional Office for South-East Asia. The target for kala-azar elimination in the Region set in this MoU is on or before 2017. This is defined as bringing down the incidence to less than one per 10 000 population at block level in India, upazila level in Bangladesh and district level in Nepal. As a follow-up of this MoU, in March 2015, the WHO Regional Office convened a one-day meeting of the signatories of the MoU to provide a platform to discuss issues and share experiences as well as to update them on the work that is being undertaken. A meeting was organized in Geneva in February 2015 between officials of the main endemic countries in the Region together with donors and partners supporting the national programmes. Member States have been working on strengthening and streamlining their national programmes following the MoU. India has aligned its treatment policy with other endemic countries as per WHO recommendation and rolled out liposomal amphotericin B (LAMB) treatment, and introduced synthetic pyrethroids (SP) to the arsenal of insecticides for controlling the sandfly vector, rolling it out to all endemic units. Free drugs have now been provided to all three endemic countries and the Regional Office is also supporting Member States with rK39 diagnostics based on the requests received. Accelerated efforts and impressive progress are being made by other countries of the Region as well. A meeting of senior health officials, programme managers and experts is planned to be held in September 2015 in Myanmar, where kala-azar along with other NTD targeted for elimination by 2020 would be discussed.

10. The Region is making good progress, with the total reported cases and deaths in 2014 being 10 559 and 15 respectively, while the figures stood at 39 619 and 172 respectively in 2008. This is a 73% reduction in reported cases and 91% reduction in deaths compared to 2008. The highest decline in the number of cases (85%) was seen in Nepal (from 1197 in 2008 to 180 in 2014) while the highest decline in reported deaths (93%) was seen in India (from 150 in 2008 to 11 in 2014). Around 88% of the cases reported from the Region in 2014 are from India (9241), while Bangladesh and Nepal reported around 1000 and 100 cases respectively. By 2014, all endemic districts in Nepal, 92% of endemic upazillas in Bangladesh and 74% of endemic blocks in India had achieved this target.

11. Yaws is the third disease (the other two being dracunculiasis and poliomyelitis) targeted for eradication by 2020. WHO recommends total community treatment of endemic areas with a single dose of oral azithromycin as the preferred treatment option. To ensure interruption of transmission, high treatment coverage of preferably 100% must be achieved, followed by 3–6 monthly surveys and treatment of individual cases until zero case incidence is achieved.

12. Two countries in the Region (Indonesia and Timor-Leste) are currently reporting yaws. India eliminated the disease in 2006, which led to the conviction that yaws could be eradicated. Indonesia reported 2560 cases of yaws in 2013 and is one of the high-burden countries in the world. Eighteen of the 33 provinces in Indonesia report cases of yaws, with five provinces considered to be high-burden. Accurate data on prevalence in Timor-Leste is not available, but it is believed to be endemic in at least six of the 13 districts.

13. World Health Assembly Resolution WHA44.9 on elimination of Leprosy called for elimination of leprosy as a public health problem by the year 2000. The elimination target was defined as reduction of disease prevalence to less than one case per 10 000 population. Leprosy is endemic in all 11 Member States of the Region. While the Democratic People’s Republic of
Korea is reporting zero cases for the past 2–3 years, all other Member States have also achieved the elimination target at national level. However, the Region continues to have a high burden of the disease and contributes the largest number to the global pool. Six countries in the Region — Bangladesh, India, Indonesia, Myanmar, Nepal and Sri Lanka are among the high leprosy burden countries in the world, reporting more than 1000 new cases every year. In 2013, the Region reported over 155 000 new cases (72% of the global total), over 126 000 of this being reported from India. The Region also accounts for 60% of global leprosy disabilities reported in 2013 with around 5% of the new cases having grade 2 deformity.

In addition to the target for reduction of disease prevalence, the enhanced global strategy also set a target of reducing new cases with grade 2 disabilities (G2D cases) or visible deformities to 35% of the rate in 2010. The strategy adopted for leprosy elimination is early case detection and complete treatment with multidrug therapy. All Member States are receiving free drugs through WHO for the complete treatment of leprosy patients. Chemoprophylaxis for leprosy is being piloted in a few countries and there is need to obtain global consensus on this.

Endemicity of schistosomiasis in the Region is limited to three isolated areas of two districts in Central Sulawesi, Indonesia with an at-risk population of just over 30 000 people. The schistosomiasis elimination programme in Indonesia is based on mass treatment with praziquantel provided freely through WHO in addition to snail control and environmental management. The disease elimination efforts are, however, challenged by difficult geographic terrain, lack of safe water supply and sanitary latrines in the households of endemic areas, poor local ownership and support and inadequate efforts on snail control.

Challenges

Though the Region is making good progress and meeting most of the milestones on the elimination of these diseases, there are several challenges that need to be addressed to accelerate and sustain the progress. Some of the recognized challenges include:

- weakness in programme management;
- delay in reporting and poor data management;
- cross-border surveillance and information-sharing;
- weak procurement and supply chain management;
- multisectoral collaboration and engaging non-health sectors;
- low priority and resource allocation in decentralized settings;
- sustaining political commitment after attaining elimination target; and
- inadequate vector management and lack of vector control expertise.

Way forward

A regional task force has been established to guide and advise the Regional Office on meeting the challenges and strengthening the disease elimination programmes. Member States are making good progress in achieving the elimination targets for these diseases and these efforts must be sustained. There is a need to strengthen programme management, especially at subnational level, data management; monitoring and evaluation; and cross-border collaboration.