

Viewpoint

Deleting the 'neglect' from two neglected tropical diseases in India

India has demonstrated exemplary leadership, motivation, and political will in becoming polio-myelitis free¹. It is time to repeat the feat by eliminating two neglected tropical diseases (NTDs) from the country latest by 2020 - visceral leishmaniasis (VL, kala-azar) and lymphatic filariasis (LF, elephantitis). India has committed itself for control/elimination of these diseases. It is a signatory to the World Health Assembly (WHA) resolutions on leishmaniasis², lymphatic filariasis³, and also Resolution on Neglected Tropical Diseases⁴. For various reasons India has, in past, missed the date for elimination of both VL and LF.

By signing these resolutions, India became a part of the global community in its fight against NTDs. There is a renewed global push for control/elimination/eradication of the 17 NTDs championed by the World Health Organization (WHO). In its stewardship role the WHO has enunciated strategies and policies to combat neglected tropical diseases in its Global Plan 2008-2015⁵, followed by a medium term strategic Plan 2008-2013⁶, and finally in 2012 a road map to guide the implementation of the strategies/policies enunciated in the Global Plan⁷. It set bold targets for control/elimination/eradication of the 17 NTDs. The diseases identified for elimination and the period in which this should be accomplished have been arrived at by carefully assessing the current level of understanding of the epidemiology of the diseases and tools available in the armamentarium for their elimination. Global elimination of LF, and regional elimination of VL as public health problem from the Indian Sub-continent have been targeted by the WHO for 2020. To assist the member countries of the Region in elimination of VL from the South-East Asia the Regional Office of the WHO has also prepared a Regional Strategic

Framework⁸. In epidemiological terms elimination translates into occurrence of less than one case per 10,000 population at Primary Health Centre (block) level.

Inspired by the WHO's bold initiative, a coalition of diverse partners came together under the banner 'Uniting to Combat NTDs'⁹ pledging their commitment in a document called the 'London Declaration on NTDs' to provide support towards attaining the WHO road map targets for ten NTDs which include VL and LF¹⁰. India is a signatory to this declaration also. The 'Uniting to Combat NTDs' has set up a 'Stakeholders Working Group' which among other tasks tracks the progress towards the elimination and compiles a score card.

In addition to being on the watch-list of the Working Group, there are other compelling reasons for India to accelerate progress towards elimination. Since India contributes a significant proportion to global burden of these diseases (for VL it is 50%¹¹, for LF 40%¹²), reduction in India would substantially impact global burden. Elimination of LF and VL will significantly reduce illness and death and will contribute to the Sustainable Development Goals. Reduction of days lost due to ill health will improve the healthy life and subsequent drop in the financial burden of ill health will help to pull families out of poverty. Ensuring the availability of various interventions for VL and LF will improve access to Universal Health Care.

In 2005, India signed a Tripartite Memorandum of Understanding (MOU) with Bangladesh, and Nepal to eliminate kala-azar from the South-East Asia Region by 2015. A renewed MoU signed in 2014 between these three countries and Bhutan and Thailand has re-energized the political commitment

and elimination efforts. The new target year is 2017¹³. India has launched a campaign '*Swatchh Bharat Abhiyan*' (Clean India Mission) in 2014¹⁴. Linking the elimination programmes with this Mission and other programmes connected to provision of safe water, waste disposal, basic sanitation will make the elimination sustainable. Inadequate water supply, limited access to sanitation facilities and poor hygiene are major contributing factors to the spread of several diseases. Specifically, areas with stagnant water are breeding grounds for insects that transmit LF; poor housing, domestic sanitary conditions such as lack of waste management and open sewerage may increase sandfly breeding.

In India, the Kala-azar Elimination Programme and the Filariasis Elimination Programme are operated under the aegis of the National Vector Borne Disease Control Programme (NVBDCP). Kala-azar is endemic in eastern States of India namely Bihar, Jharkhand, Uttar Pradesh and West Bengal. Overall, 54 districts are endemic (sporadic cases reported from a few other districts). An estimated 130-165 million population is at risk in these four States. Indigenous cases of lymphatic filariasis have been reported from about 255 districts in 21 States/Union Territories¹². An estimated 550-600 million people are at risk of lymphatic filariasis in these districts. The people who suffer from VL and LF are mostly poor socio-economic groups of population primarily living in rural areas. The Ministry of Health and Family Welfare has constituted a Core Group within the Ministry for guidance and oversight of progress towards VL elimination. Based on global, regional and local evidence a National Road Map for VL elimination has also been prepared in 2014¹². These programmes, among others, have been reviewed by the Joint Missions of the WHO and several areas for strengthening have been identified¹⁵. Earlier the ICMR has assessed the National Filariasis Control Programme several times¹⁶. A common observation has been that there are operational problems in efficient implementation of the programmes. Very little operational research has been done; if it has been conducted, the impact of that research is not visible.

Proposed twin-track approach

To ensure that elimination of VL and LF is not lost sight of, it is suggested that the Prime Minister's office (PMO) sets up an Independent Monitoring Board (IMB) on the progress being made on elimination of VL and

LF. This Board would have eminent persons - national and international as members. The Board would assess the progress and pitfalls towards the attainment of elimination of VL and LF. If during its meetings the Board concludes that any of the process indicators are at-risk or missed, the relevant State and the NVBDCP would be engaged to establish corrective measures. The IMB would report to the PMO and the reports would also go to the NVBDC, the State Government, and the Minister of Health & Family Welfare. Creation of this Board may elevate the visibility of elimination programme several notches up.

The second track would be to encourage and make funds available for research especially operational variety. Policy Cures' recent report on 'Neglected Diseases Research & Development: Emerging Trends'¹⁷ provides options for additional funds. The Report focuses on product areas for these diseases, including drugs, vaccines, diagnostics, and vector control products. The Government of India emerges as one of the top global funders of neglected diseases R&D. Total public sector funding in India for neglected diseases R&D in 2013 was USD 50 million, making it the world's fifth largest government funder behind the US, the UK and the European Commission and France¹⁷.

According to another report from Policy Cures¹⁸ majority of Government of India funding is directed towards basic and early-stage research. Despite the impressive amounts of funds being spent on R&D, there are very few examples of Indian organizations being originators of new products be it vaccines, drugs, diagnostics or devices. If need be, some of this fund could be diverted towards programme related research. India should develop a coherent strategic direction towards research in diseases for which it has signed up for elimination. A concerted research strategy is needed to assist the elimination efforts. A more robust framework for bridging the gap between evidence to policy and implementation should become operative.

India has challenges and opportunities. Challenge is to demonstrate that elimination of poliomyelitis is not an exception. Challenge is to maintain the focus on the NTDs in an environment where burden of non-communicable diseases is increasing. Opportunity lies in evolving image of India. India has become the new economic icon of emerging powers. At predicted GDP (gross domestic product) growth at 7.8 per cent

in 2016, India is becoming a fastest growing economy in the world¹⁹. Opportunity is for India to play a much larger role on the world stage, and show that it delivers.

Lalit Kant*

Sr Adviser-Infectious Diseases
Public Health Foundation of India
Gurgaon 122 002, Haryana, India
lalit.kant@phfi.org

*This is author's personal viewpoint, without any link with the institutions the author was/is associated with earlier/now.

Conflicts of Interest: None.

References

1. WHO. *India records one year without polio cases*. Available from: http://www.who.int/mediacentre/news/releases/2012/polio_20120113/en/, accessed on September 15, 2015.
2. WHO. *Control of leishmaniasis*. Sixtieth World Health Assembly. WHA 60.13, 2007. Available from: http://www.who.int/neglected_diseases/mediacentre/WHA_60.13_Eng.pdf, accessed on September 15, 2015.
3. WHO. *Elimination of lymphatic filariasis as a public health problem*. Fiftieth World Health Assembly. WHA 50.29, 1997. Available from: http://www.who.int/lymphatic_filariasis/resources/WHA_50%2029.pdf, accessed on September 15, 2015.
4. WHO. *Neglected Tropical Diseases*. Sixty-sixth World Health Assembly. WHA 66.12, 2013. http://www.who.int/neglected_diseases/mediacentre/WHA_66.12_Eng.pdf, accessed on September 15, 2015.
5. WHO. *Global plan to combat neglected tropical diseases 2008-2015*. World Health Organization, Geneva 2007 (WHO/CDS/NTD/2007.3). Available from: http://apps.who.int/iris/bitstream/10665/69708/1/WHO_CDS_NTD_2007.3_eng.pdf, accessed on September 15, 2015.
6. WHO. *Medium-term strategic plan 2008–2013 [amended draft] and Proposed programme budget 2010-2011*. World Health Organization, Geneva; 2009. Available from: http://apps.who.int/gb/e/e_amtsp3.html, accessed on September 10, 2015.
7. WHO. *Accelerating work to overcome the global impact of neglected tropical diseases - A roadmap for implementation*. World Health Organization, Geneva; 2012. (WHO/HTM/NTD/2012.1). Available from: http://www.who.int/neglected_diseases/NTD_RoadMap_2012_Fullversion.pdf, accessed on September 10, 2015.
8. WHO. *Regional Strategic Framework for Elimination of Kala-Azar from the South-East Asia Region (2005-2015)*. Department of Communicable Diseases, World Health Organization Regional Office for South-East Asia, New Delhi, January 1, 2005. Available from: http://apps.searo.who.int/pds_docs/b0211.pdf, accessed on September 10, 2015.
9. *Uniting to Combat NTDs*. Available from: <http://unitingtocombatntds.org/>, accessed on September 10, 2015.
10. *The London Declaration. Uniting to Combat NTDs*. Available from: <http://unitingtocombatntds.org/resource/london-declaration>, accessed on September 11, 2015.
11. Ramaiah KD, Das PK, Michael E, Guyatt H. The economic burden of lymphatic filariasis in India. *Parasitol Today* 2000; 16 : 251-3.
12. Directorate of National Vector Borne Disease Control Programme (NVBDCP). National road map for kala-azar elimination. Directorate General of Health Services Minister of Health & Family Welfare. August 2014. Available from: http://nvbdcp.gov.in/Doc/Road-map-KA_2014.pdf, accessed on September 8, 2015.
13. WHO. Health Ministers commit to eliminating kala-azar. 2014. Available from: <http://www.searo.who.int/mediacentre/releases/2014/pr1581/en/>, accessed on September 8, 2015.
14. *Swachh Bharat Abhiyan*. Available from: <http://india.gov.in/swachh-bharat-abhiyaan-clean-india-mission>, accessed on October 15, 2015.
15. National Vector Borne Diseases Control Programme. Report on the Joint Monitoring Mission. 2014. Available from: <http://www.searo.who.int/india/publications/en/>, accessed on October 15, 2015.
16. Vector Control Research Centre. Lymphatic filariasis. Available from: <http://www.vcrc.res.in/forms/modulelist.aspx?lid=2134&mid=25>, accessed on October 15, 2015.
17. Moran M, Guzman J, Chapman N, Abela-Oversteegen L, Whittall C, Howard R, *et al*. Neglected Diseases Research & Development: Emerging Trends. Policy Cures, Australia. December 2014. Available from: <http://www.policycures.org/downloads/Y7%20GFINDER%20full%20report%20web%20.pdf>, accessed on September 8, 2015.
18. Moran M, Guzman J, Chapman N, Abela-Oversteegen L, Whittall C, Howard R, *et al*. The Role of 'Team India' in Global Health R&D. Policy Cures, Australia. March 2015. Available from: <http://policycures.org/downloads/Indian%20Report.pdf>, accessed on September 8, 2015.
19. The World Bank. Global Economic Prospects. Forecast Table. Available from: <http://www.worldbank.org/en/publication/global-economic-prospects/summary-table>, accessed on September 8, 2015.