



## EDITORIAL

### NEGLECTED TROPICAL DISEASES: EMBRACING THE NEW ROADMAP

Niki Shrestha

Department of Community Medicine, Chitwan Medical College, Chitwan, Nepal  
E-mail: [shrestha.niki@cmc.edu.np](mailto:shrestha.niki@cmc.edu.np)

#### INTRODUCTION

Neglected tropical diseases (NTDs) impose a devastating human, economic and social burden. NTDs have affected more than one billion people worldwide.<sup>1</sup> When looked at, from a political public health perspective, it is an indication that NTDs were only recently “rediscovered” after having been overshadowed for several years by the “big three” (HIV, malaria and tuberculosis).<sup>2</sup> From an equity perspective, NTDs are especially found in vulnerable, marginalized populations. All NTDs have a singular commonality; the devastating impact on impoverished communities.

The NTDs prioritized by WHO are a diverse set of 20 diseases and disease groups namely – Soil-transmitted helminthiasis (STH); Snakebite envenoming; Dengue and chikungunya; Dracunculiasis; Buruli ulcer; Chagas disease; Echinococcosis; Foodborne trematodiasis; Human African trypanosomiasis; Leishmaniasis; Leprosy; Lymphatic filariasis; Mycetoma, chromoblastomycosis and other deep mycoses; Onchocerciasis; Rabies; Scabies and other ectoparasitoses; Schistosomiasis; Taeniasis and cysticercosis; Trachoma and Yaws.<sup>1</sup>

#### Global Scenario of NTDs

Effective, elaborate, timely and adequate action against NTDs is central to the vision of achieving universal health coverage and contributes to the achievement of the Sustainable Development Goals. As compared to 2010, today, around 600 million fewer people are at risk of NTDs and require interventions while 42 countries have eliminated at least one NTD.<sup>1</sup> Lymphatic filariasis and trachoma are the two NTDs that have been eliminated in 17 and 10 countries, respectively, while the number of new leprosy cases reported have also declined since 2010 at an average of 1% per year. The annual number of cases of human African trypanosomiasis has fallen from more than 7000 in 2012 to fewer than 1000 in 2019, halving the original target of 2000 cases by 2020. Onchocerciasis has been eliminated in four countries in the Region of the Americas. Dracunculiasis is on the verge of eradication, with 54 human cases reported in four countries in 2019.<sup>3</sup>

Considerable progress has been made in NTDs and this has helped considerably lessen the human and economic burden that NTDs impose on the world’s most disadvantaged

communities. Today, one of the “best buys” in global public health are the interventions to prevent and control NTDs and these interventions have yielded an estimated net benefit to affected individuals of about US\$ 25 per US\$ 1 invested in preventive chemotherapy.<sup>1</sup>

#### New roadmap for NTDs 2021-2030

The new roadmap for NTDs 2021-2030 focuses on three pillars that will support global efforts to control, eliminate and eradicate neglected tropical diseases.<sup>1</sup> The first pillar is accelerating programmatic action through technical progress (e.g. scientific understanding, effective intervention), strategy and service delivery (e.g. planning and implementation, access and logistics) and enablers (e.g. advocacy and funding, collaboration and multisectoral action). The second pillar is intensifying cross-cutting approaches by integrating NTDs on common delivery platforms that combine work on several diseases, by mainstreaming within national health systems to improve the quality of NTD management in the context of universal health coverage and by coordinating with other sectors within and beyond health on NTD-related interventions. The third pillar is changing operating models and culture to facilitate country ownership. An integrated approach to NTD activities is expected to result in better health outcomes, greater cost efficiency and effectiveness and better programme management.<sup>3</sup>

The core approaches to integration, as envisaged by the World Health Organization (WHO), include, where applicable - social mobilization; preventive chemotherapy, active case finding; targeted prevention; vector control; one health approaches; point-of-care diagnosis; support networks; self-care packages; counselling and psychological support; health care worker training; provision of physical therapy; development and use of emergency response systems; provision of assistive devices; laboratory diagnosis; management of complications and surgery as well as integrated referral management and tracking system.<sup>3</sup>

#### Status Update on NTDs in Nepal

Nepal is now endemic for many tropical diseases. However, a clear identification of NTDs in Nepal is not yet available and there is clearly a need for an evidence-based scaling up of

NTD control programmes in the country. The Nepal Health Research Council (NHRC) with the support of the WHO, in 2015, organized a 'National Workshop on NTDs in Nepal: Identifying the gaps and mapping the way forward'. The workshop participants agreed that Nepal is already endemic for eight NTDs. These are - Lymphatic Filariasis, Trachoma, Soil Transmitted Helminthiases, Dengue, Visceral Leishmaniasis, Leprosy, Rabies and Cysticercosis.<sup>4</sup>

**Trachoma:** Nepal achieved Trachoma elimination in 2018. Trachoma was the second leading cause of blindness in Nepal until 1981.<sup>5</sup>

**Rabies:** Several activities are taking place for rabies control in Nepal. The country has conducted an epidemiological study on the active dog bite cases as well as surveillance about rabies in outbreak areas. Orientation program about the benefit of Intradermal (ID) delivery of Anti Rabies Vaccine (ARV) for health workers, procurement of cell culture ARV vaccine and immunoglobulin as well as awareness programs in schools and for the general public are also being carried out. However, Intra dermal vaccination has not started at all sites and mass dog vaccination (at least 70% dog vaccination) has not been achieved so far in the country.<sup>6</sup>

**Dengue:** Nepal has developed national guidelines on prevention, management and control of Dengue. Dengue case monitoring and vector surveillance is being actively carried out. The country has also developed the IEC materials and disseminated the awareness messages through media and other relevant means of communications. Physicians, nurses, paramedics and laboratory technicians have been trained on dengue case detection, diagnosis, management and reporting. Orientation has been carried out for municipality stakeholders in 34 districts. The rapid diagnostic test kits (IgM) have been supplied and the search and destruction of dengue vector larvae has been carried out in 34 districts at different local levels.<sup>6</sup>

**Leprosy:** The registered prevalence rate of 0.99 cases per 10,000 populations for Leprosy at national level was reported in 2075/76, which is below the cut-off point, i.e. below 1 case per 10,000 population as per the standard set by WHO. However, the increasing trend of registered prevalence rate after the elimination in 2009 is a serious concern for leprosy control program. Therefore, early and active case detection activities, verification and validation of records/reports of local health facility level/municipalities and capacity building of health workers are undergoing but need to be escalated to obtain the goal of Zero Leprosy Nepal. There is a need to expand services for early detection of leprosy cases at health facility, especially in high prevalence districts through enhancing selected diverse approaches (ISDT); initiate Post-Exposure Leprosy Prophylaxis to family members and neighbors; strive to achieve the surveillance performance indicators as well as modernize and intensify the service delivery pathways for ensuring quality services.<sup>6</sup>

**Kala-azar:** In 2075/76, there has been a decrease in the number of reported cases of Kala-azar as compared to the previous year. However, there has been a rapid increase in Kala-azar cases compared to previous years among non-programme districts. There is availability of recently revised standard national guidelines for kala-azar elimination program in Nepal. There is availability of free of costs drugs and diagnostics for early case detection and timely treatment of kala-azar cases in the country. The country focuses on the use of multi-disciplinary approach to overcome the challenges for elimination of Kala-azar. There is implementation of Health Management Information System (HMIS) and Early Warning and Reporting System (EWARS) for surveillance of Kala-azar as well as the use of different approaches of active case detection of Kala-azar such as camp based approach and index case-based approach. However, at present, the disease surveillance is mostly passive and some of the cases of private sector is missing which is merely covered by the surveillance system. There is also a lack of regularly trained staffs to monitor outbreak investigation and response efforts in non-endemic districts.<sup>6</sup>

**Lymphatic Filariasis:** Based on the ICT survey, morbidity reporting and geo-ecological comparability, 61 districts were identified as endemic for Lymphatic Filariasis in 2075/76. The mass drug administration (MDA) was scaled up to all endemic districts by 2069/70 (2013). As of 2075/76, MDA has been stopped (phased out) in 50 districts, post-MDA surveillance initiated in 50 districts and morbidity management partially initiated in all endemic districts. All endemic districts have completed the recommended six rounds of MDA by 2018. The major challenges that remain and need addressing to consolidate the achievements are - ensuring quality MDA, including achieving high coverage in urban areas and some specific communities; adverse event management; sustaining low prevalence in MDA phased out districts; expanding morbidity management and disability prevention, and post MDA surveillance. The biggest challenge is the persistent high prevalence in some districts despite completing the recommended rounds of MDA. There is a need to continue MDA for Pre Transmission Assessment Survey (TAS) unsuccessful districts, and carry out transmission assessment, periodic surveillance and follow up surveys to monitor progress towards elimination.<sup>6</sup>

## CONCLUSION

A multisectoral action is required across the whole gamut of NTDs. Particular focus should be on diagnostics, monitoring and evaluation. There should be access to and logistics for medicines, as well as enhanced activities for advocacy, capacity strengthening and adequate funding. Impact-oriented targets are needed to guide efforts towards NTDs control and elimination. Enhanced emphasis should be in targeted areas where critical gaps exist across multiple NTDs. Community based and applied research are also essential for building a solid foundation on which effective NTD interventions can be designed and effectively delivered.

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