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Summary of the Twenty-N

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In 2016, WHO published a generic framework for neglected tropical diseases (NTDs) to standardize the definitions of the targets and processes by which it would assess and acknowledge the claimed achievements among the NTDs. EPHP is achievement of global targets set by WHO for a specific infection and/or disease and when achieved requires continued action to maintain the target or to advance to the interruption of transmission. Countries claiming to have met the targets follow a process called *validation* to document EPHP. Elimination of transmission (EOT) or interruption of transmission is the reduction to zero of the incidences of infection in a defined geographical area with minimal risk of reintroduction where continued actions to prevent re-establishment of transmission may be required, but on-going interventions (such as mass drug administration (MDA)) can be suspended. The process to document EOT is *verification*. Eradication is the permanent reduction to zero of a specific pathogen globally, with no more risk of reintroduction; the process of documenting eradication is *certification*. The amount of evidence and effort required to document these achievements increases from EPHP to EOT to eradication, the latter of which can be proclaimed only at the global level.³ WHO has not yet defined the pathway, milestones and standardized criteria to verify EOT of LF, for example, and Member States have urgently requested assistance from WHO to do so.

Despite the clear value of the phrase EPHP early in the drive toward global elimination of LF, for example, the recent experience of some Member States is instructive of its limitations, including Sri Lanka, which was validated by WHO as achieving EPHP for LF. Following this achievement, but before EOT was achieved, there was subtle pressure to downplay continued problem areas with persistent LF. Sri Lanka's donor support declined dramatically, including for drug donations, diagnostic kits and operational activities. Recrudescence of LF then was documented in some communities.⁴ The ITFDE learned of similar premature loss of support by leprosy programs after that disease was declared to have achieved EPHP. Having EPHP as a target, however, has enabled substantial improved control of onchocerciasis, trachoma, leprosy and human African trypanosomiasis, as well as LF. For some diseases, effective tools and strategies are available to establish clear criteria and practical quantitative targets to document EOT, but for others research is needed to define which indicators and what tools provide the measurable evidence of zero transmission. Consideration should be given to "re-branding or "re-titling" the current validation target as "the first elimination milestone," defining the other milestones, and stating that post-treatment surveillance, outbreak investigation and response activities, and social mobilization campaigns will still be needed until EOT is achieved, to protect the earlier investment. Despite its limitations, some WHO Regional Offices, including PAHO, which has established a regional elimination agenda, feel strongly that EPHP represents a useful intermediate goal and regional bodies should maintain the freedom to establish and pursue region-specific goals.⁵

Efforts to eradicate/eliminate vaccine-preventable diseases (VPDs) provide important lessons to countries working to end the scourge of other pathogens by, among other activities, strengthening primary health care services.⁶ Strengthening primary health care service delivery and disease surveillance systems will play an important role in achieving and sustaining VPD eradication/elimination goals. Some specific examples where disease eradication/elimination efforts will likely depend on a strong primary health care service delivery system includes: (1) preventing the emergence of circulating vaccine-derived

polioviruses; (2) sustaining polio eradication activities with inactivated polio vaccine; (3) achieving and sustaining measles and rubella elimination; and (4) increasing the acceptance of vertical eradication/elimination interventions among the most marginalized populations.⁷

Economic studies have in the past few years increasingly demonstrated their value in gaining the attention of decision makers, particularly those involved in making investment choices. The most significant messages from a review of economic studies of the elimination of NTDs are that methods and estimates should be consistent across NTDs. There are resource requirements that often have not been carefully considered when technical and operational changes are proposed or made in eradication/elimination strategies. Making the investment case for an individual eradication/elimination strategy is notably problematic for domestic financing as countries confront the challenge of providing universal health care; and there are few tools available for economic appraisal at the country level.⁸

Mathematical models have been found to be increasingly useful in recent years to investigate the potential to eradicate/eliminate parasitic infections and disease. Such models help to characterize complex dynamical systems and facilitate study of their transmission, persistence and spread. For eradication/elimination programs, they allow quantification of critical transition thresholds that shift parasitic systems to their null states and can facilitate assessment of the poten

passed both TAS-1 and TAS-2, which WHO recommends two or three years following TAS-1 as part of post-treatment surveillance. Concerningly, one Haitian commune, Dondon, met stop-MDA criteria of antigen prevalence less than 2% at the 95% confidence level during TAS-1, yet failed TAS-2. This area requires at least two additional rounds of MDA and warrants further investigation to determine whether this was the result of imported cases leading to local transmission, undetected transmission, or a limitation in the TAS-1 survey design of only testing school-aged children 6-7 years old. In the Dominican Republic, LF transmission was restricted to 19 municipalities (12% of national total) in three distinct foci: the Southwest, La Cienaga in Santo Domingo, and the East. In 2018, the Southwest and La Cienaga passed

urgency, that “clouds are on the horizon” and that all matters should be seen through the lens of efforts to achieve universal health coverage.

5. To distill and use lessons drawn from rapidly progressing advances outside of the health arena, WHO was recommended to draw on experiences in the fields of education and agriculture. The ITFDE recommends that countries, NGOs, WHO, and donor organizations more fully consider the use of mathematical models of parasite transmission, which offer a powerful tool to help assess the potential to eliminate/eradicate a parasite and consequently the derivation of options to reduce variability and increase the feasibility of elimination of transmission.
6. The ITFDE recommends that WHO, in its assistance to Member States, prioritize the importance of working at the community level “from the bottom up,” to support strategies formed by local cultural context in which eradication/elimination activities take place.
7. The ITFDE recommends that WHO learn from the lessons of regional bodies that have established a regional elimination agenda, as did PAHO, the WHO Regional Office in the Americas, whose leaders meet frequently with leaders of the Inter-American Development Bank to advocate for investments. Increased and reinvigorated advocacy to decision makers (including Member States, NGO partners, donors and development banks) is needed urgently to strengthen political commitments, perhaps under the rubric of “Protecting the Investment” or “Sustaining the Gains.” Words matter, and WHO is recommended to strengthen the capacity within its Member States to use the modern tools of media and communications, particularly about the economic impact of preventable diseases to maintain political commitment and garner needed resources. WHO also is urged to intensify its efforts to distill the experiences of its Member States to more appropriately and carefully align eradication/elimination programs with VPDs, education, Water, Sanitation and Hygiene, and Integrated Disease Surveillance, a village-based system.
8. The ITFDE recognizes that one of the most urgent issues facing WHO Member States is governance,

purpose and progress of the fight against that disease very effectively and succinctly. Unfortunately, a similar pair of maps for malaria was not available.