Planning for elimination

Background

In line with ***Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030*** 🔍, the majority of NTD programmes have been set up with the eventual goal of either elimination or, at the very least, sustained control of disease. Alongside these targets, and the 2030 Sustainable Development agenda, programmes are also expected to contribute to poverty reduction and equity. In other words, NTD programmes should ideally be designed to "work themselves" into inexistence as vertical disease control programmes, by eliminating the disease from the national context, and embedding any other functions, such as management of existing cases, into routine health care services. This presents a set of unique problems already encountered in certain countries and by some disease programmes. These problems are largely inevitable, and can be expected as a country's disease profile changes.

→ **Reduced priority:** As disease prevalence diminishes in the later stages of the control programme, low prevalence drives the disease lower down the order of priority compared with other health issues that are seemingly more urgent or affect larger parts of the population. This lower priority can reduce resourcing and political will for the programme, just as it becomes more expensive to implement due to the need to target smaller and more remote pockets of transmission. This reduction in prioritization and resources is likely to cause delays in meeting elimination targets. For example, once prevalence drops below the defined thresholds and mass drug administration (MDA) is no longer carried out, lack of resources and prioritization undermines delivery of activities needed to sustain the gains achieved through MDA, risking continued transmission and possible resurgence.

→ **Resistance to change:** Once programmes have been in place for some time, the incentives attached to them are likely to become strongly embedded – including specific jobs, budgets, resources such as vehicles and other programme supplies, as well as less tangible aspects such as prestige and work relationships. This means that integration, and incorporating programme functions into the broader health systems and other sectors can be threatening – especially if it leads to programmes being closed, and power and resources diverted away from people who have held them for a long time. This can make changes difficult even if they make sense from a disease-control, cost effectiveness and health systems strengthening perspective.

→ **Diminished expertise and support:** The specialized nature of many disease programmes also makes them highly dependent on specific skills and resources. As the disease becomes rarer, so do the expertise to identify, treat and prevent it, and the desire of medical professionals to gain these skills. Additionally, many NTD programmes rely on drugs donated by pharmaceutical companies, and are therefore subject to the continued availability of the drugs and the willingness of the companies to donate them – both of which may not be infinite.

Purpose

The purpose of this tool is to assist NTD programmes to plan from the outset for elimination, and pre-empt and possibly avoid the problems described above. It describes the stages likely to be experienced by programmes as they progress though the control-to-elimination continuum, and the measures and activities that should be implemented at each stage to sustain the gains made in disease control, poverty and inequity in the long run. It uses the intervention area of water, sanitation and hygiene to illustrate the way interventions and activities change as a programme moves from its initial phase towards elimination.

NTD control programme phases

The table below (based on criteria described by Xiao-Nong Zhou on schistosomiasis elimination in China) sets out the phases that disease control programmes are predicted to follow towards elimination, from the starting point of ongoing transmission and high prevalence (**morbidity control**), through to lower prevalence with transmission in specific locations (**infection control**), to low prevalence (**transmission control**), to very low prevalence (**transmission interruption**) to **elimination**. The **post-elimination** (or post validation of elimination) phase is also included here, acknowledging the need for continued activities to retain low levels of prevalence.

As programmes progress through these phases, the interventions implemented change from specific interventions designed to treat the disease or reduce prevalence, to activities that sustain the impact of the initial direct interventions. Intervention areas include preventive chemotherapy (PC); vector ecology and management or Integrated Vector Control and Management (IVCM); innovative and intensified disease management (IIDM); water, sanitation and hygiene (WASH); and measures to address neglected zoonotic diseases, including through veterinary public health interventions (VPH). At the same time that the interventions themselves change, programmes should endeavour to shift away from vertical delivery of all components through the specific disease control programme, to embedding key interventions into existing health systems (for example, diagnostic and surgical capacity) and programmes delivered by other sectors (for example, water and sanitation interventions). See **International Coalition for Trachoma Control** 🔍 for an example of planning for transition to elimination for trachoma programmes.

Elimination

THRESHOLD		Morbidity control	Infection control	Transmission control	Transmission interruption	Post-elimination (post validation)
PREVALENCE THRESHOLD (threshold levels for schistosomiasis control used for illustration)		> 10%	5–10%	1–5%	0–1%	(0%)
DESCRIPTION		Transmission/ High prevalence	Continued transmission in specific geographic areas	Under control	**Pre-elimination**	Continued action to ensure sustained low prevalence
INTERVENTIONS	Baseline mapping	All interventions (WASH, MDA, IVCM, VPH, IIDM)	• Selective chemotherapy • WASH • IVCM • IIDM	• Surveillance • Individual chemotherapy treatment • IIDM • WASH • VCM	• Individual chemotherapy treatment • IIDM • WASH • IVCM • Surveillance-response	• Monitoring environmental factors • Case finding • IIDM

Source: Adapted from: Zhou XN. [Implementation of precision control to achieve the goal of schistosomiasis elimination in China.] Zhongguo Xue Xi Chong Bing Fang Zhi Za Zhi. 2016;28(1):1-4.

As programmes progress from the initial (morbidity control) phase, the nature of the interventions as well as those delivering them are likely to require change, to respond to the changing epidemiology of the disease, levels of awareness of the affected population, resourcing levels, partnerships, and so on. The following section illustrates this point through the WASH intervention area.

Key WASH considerations for elimination planning

Although the role of WASH interventions in prevention and care of many NTDs is acknowledged in most control strategies, the specific actions that should be implemented by NTD programmes are often undefined. Planning for elimination should consider how, and by whom, WASH interventions will be implemented throughout the programme lifecycle, and once the programme ends (where relevant). Given the nature of WASH interventions and the fact that the overall responsibility for delivering WASH services often lies with agencies other than the disease control programme or the health authorities, the transition towards elimination should be planned for from the outset of the programme by involving key WASH, education and health stakeholders in programme design and implementation, identifying intervention delivery avenues including both the WASH sector and health outreach programmes (for infrastructure development and promotional activities respectively), and making lesson-based adjustments to these programmes to ensure they include actions necessary for sustaining low levels of NTD prevalence. This "planning for elimination" process should consider:

→ **The optimal delivery avenue for different WASH interventions:** Although the NTD programme may not be responsible for delivering WASH interventions (although some do include specific WASH interventions), it plays an important role in highlighting where the need is by identifying endemic populations. See **Supplementary tool: Budgeting for joint WASH and NTDs programmes** 💰. To the extent possible, infrastructure development should be led by the national water and sanitation programme in accordance with agreed standards and targets. Infrastructure interventions implemented by the NTD programme itself should be justified on the basis of coverage gaps or specific disease control measures and delivered in close coordination with the WASH sector. The "lifetime costs" of WASH interventions should be considered (including maintenance, rehabilitation, replacement, hydrological changes) beyond the programme ending and in line with global NTD and development targets.

→ **Best practice in behaviour change communication:** Addressing behaviours that lead to disease transmission, increased disease severity or discrimination against people affected by disease is a crucial part of any disease control programme, and should be included in programme design from the outset. As the disease becomes rarer, the motives of individuals and communities for changing their behaviours may shift away from the need to avoid infection, as the risk of disease and its implications becomes less obvious. In other words, people are less likely to fear an infection they have never witnessed. This means that behaviour change activities should be planned in advance around, or shifted towards, broader and more positive motives around overall well-being, convenience, social respect and so on – and explicitly away from focusing on the need to prevent a specific disease. See **Tool 2: NTD-related behaviours** ⚙ and **Tool 3: Understanding behaviour to develop behaviour change interventions** ⚙. The shift in the nature of the behaviour change objectives should be accompanied by embedding behaviour change activities within WASH programmes and other health promotion initiatives and services.

→ **System strengthening for sustaining elimination:** WASH interventions should be implemented in a way that strengthens the capacity of the WASH sector to implement and manage services, by utilizing and enhancing existing decision-making and coordination structures. This may include national-level working groups and technical support units, as well as environmental health departments within MoH, and district-level WASH offices and WASH coordination committees. Collaboration with WASH sector professionals from the design phase of the disease control programme is important to ensure that infrastructure is optimized for disease control purposes (e.g. to ensure that construction of basic toilets meets quality standards that ensure safe separation of excreta from humans and the environment), and to ensure that infrastructure is inclusive (for example, accessible to people with disease-related disabilities).

→ **Link with other disease control efforts:** Complementarities with other disease control programmes, e.g. for other NTDs or WASH-related diseases, should be explored as the basis for integration of activities. The more integrated the disease control programme, the simpler it will be to coordinate with the WASH sector, and to gain broader health benefits from WASH interventions. Broadening the scope of the programme also makes it easier for WASH and other health programmes to see the benefits of collaboration, when it is obvious that this will help these programmes achieve their own objectives.

Basic steps for elimination planning

Step 1: Establish a clear vision, by defining:

→ The nature of the programme towards and after elimination, i.e. changing from a vertical disease control programme focused on MDA to significantly reduce prevalence, to a comprehensive, multisectoral programme embedded in respective sectors designed to keep prevalence low. In China, for example, the schistosomiasis control strategy changed from MDA-based morbidity control to an integrated scheme including livestock management, snail control, improved sanitation, and intensive behaviour change promotion to further reduce the disease burden and interrupt transmission.

→ The prevailing conditions in previously endemic areas once the programme goals have been achieved, such as level of access to and quality of WASH services, key practices and behaviours.

Step 2: Identify key partners and relevant programmes for collaboration and eventual integration in the WASH, health, education and other sectors. See **Tool 7: Planning tool: step-by-step process to developing comprehensive and adaptive NTD programmes** .

→ Use the district **Supplementary tool: WASH-NTD partner form** to understand where partners operate and where the gaps are as you plan.

→ Identify health system components to link with the programme for eventual integration of routine activities (case detection, individual treatment, passive surveillance through routine health reporting systems, health promotion) into existing health system structures including environmental health (e.g. for behaviour change, vector control, food chain inspection, water quality monitoring) and community outreach programmes. See **Tool 6: Situation analysis for WASH and NTDs planning: protocol and methods** for further detail on how this can be done.

→ Identify entry points for delivery of key functions in non-health sectors, e.g. use of disease prevalence data for targeting WASH services, identifying areas at risk of resurgence due to poor WASH conditions, use of agricultural outreach for zoonosis surveillance, promotion

of animal husbandry practices, immunization, food chain inspection and standards enforcement. See **Tool 6: Situation analysis for WASH and NTDs planning: protocol and methods** ⬡ for further detail on how this can be done.

→ Take a phased approach to integration. Identify which components can be easily integrated from the outset, and which will require a transition process. For example, enhancing behaviour change programmes to include additional messaging would be relatively simple, while programme elements such as diagnosis or surgery may take longer to embed in the health care system. See **International Coalition for Trachoma Control** 🔍 for detailed examples from trachoma elimination transition planning.

Step 3: Be prepared for the risk of reduced programme funding as you near elimination, and the disease becomes less urgent and de-prioritized.

→ Establish a clear business case for full funding until elimination has been achieved, articulating the benefits of the disease programme in terms of health systems strengthening, broader health impact and achieving equity and poverty reduction goals in line with the sustainable development agenda. See STEP 4. Planning and programme design: Financial arrangement for a successful programme and **Supplementary tool: Improving coordination in low-resource settings** ✋.

→ Be conscious of the incentives and power dynamics that accompany reductions in programme income, and develop measures to address these as the programme transitions towards later phases. For example, identify opportunities for professional development and job progression for programme staff.

Step 4: Define the monitoring approach for implementation at late programme stages. See STEP 5. Implementing and monitoring.