19th Regional Lymphatic Filariasis Elimination Program Managers Meeting

18th Regional Program Review Group Meeting

25–26 August 2020
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<th>Description</th>
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<tbody>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>COVID-19</td>
<td>coronavirus disease 2019</td>
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<td>DA</td>
<td>diethylcarbamazine plus albendazole</td>
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<td>DIP</td>
<td>direct inspection protocol</td>
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<td>FTS</td>
<td>Filariasis Test Strip</td>
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<td>GAELF</td>
<td>Global Alliance to Eliminate Lymphatic Filariasis</td>
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<td>GPELF</td>
<td>Global Programme to Eliminate Lymphatic Filariasis</td>
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<tr>
<td>IDA</td>
<td>ivermectin plus diethylcarbamazine plus albendazole</td>
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<td>IU</td>
<td>implementation unit</td>
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<td>LF</td>
<td>lymphatic filariasis</td>
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<td>MDA</td>
<td>mass drug administration</td>
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<td>MMDP</td>
<td>morbidity management and disability prevention</td>
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<td>NID</td>
<td>neglected infectious disease</td>
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<td>NTD</td>
<td>neglected tropical disease</td>
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<td>NTDCP</td>
<td>Neglected Tropical Disease Control Programme</td>
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<td>PAHO</td>
<td>Pan American Health Organization</td>
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<td>STH</td>
<td>soil-transmitted helminths (diseases)</td>
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<td>TAS</td>
<td>transmission assessment survey</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WHO</td>
<td>World Health Organization</td>
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The 19th Regional Lymphatic Filariasis Elimination Program Managers Meeting and 18th Regional Program Review Group Meeting for the Americas was held in August 2020 using a virtual platform due to restrictions imposed by the COVID-19 pandemic. The purpose of this meeting was to establish dialogue and consensus between Ministries of Health, partners, and stakeholders to identify achievements, needs, and next steps to accelerate the efforts toward the regional elimination of lymphatic filariasis (LF) as a public health problem. The participants discussed progress, lessons learned, and challenges in mass drug administration (MDA), transmission assessment surveys, morbidity management and disability prevention, dossier documentation, and transition between filariasis elimination and soil-transmitted helminths strategies for endemic countries in the Americas. The challenges imposed by the COVID-19 pandemic were a key topic of discussion.

At the global level, the number of people estimated to be infected has decreased from 198.7 million in 2000 to 51.4 million in 2018. Three more countries, Kiribati, Malawi, and Yemen, were validated in 2019 and 2020 for elimination of LF, bringing the total to 17 countries meeting the criteria for eliminating LF as a public health problem. The Region of the Americas has also made important progress:

- Brazil is currently implementing post-MDA surveillance. The dossier required to request validation by WHO of the elimination of LF as a public health problem is being developed to be submitted to the Regional Program Review Group.
- The Dominican Republic reported effective MDA coverage in the last remaining endemic foci and passed (prevalence level below the threshold value) the Transmission Assessment Survey 3 (TAS3) in La Ciénaga and Southwest (Barahona), while the Eastern focus needs to conduct TAS2 and TAS3. A national remapping survey will be conducted in 2021.
- Guyana implemented a remapping survey in 2018 to identify endemic areas in six remaining regions. In addition to the four “mature” regions (III, IV, V, and X), four naive implementation units (IUs) were identified in regions I, II, VI, and VII. MDA using triple medication (ivermectin plus diethylcarbamazine plus albendazole, or IDA) was implemented in 2019 in 100% of IUs and they all achieved effective coverage.
- Haiti passed TAS3 in 112 out of 140 LF endemic communes. Only 22 communes remain endemic, most of them in the metropolitan area of Port-au-Prince.

Morbidity management is the main challenge in the Region of the Americas. The burden of the disease is underestimated and only one country has been reporting availability of morbidity management and disability prevention (MMDP) care by IUs with known patients. To move forward during this last track of the elimination path, new approaches and lessons learned are being used to improve the quality of MDA, such as microplanning tools, acceptability assessment surveys, combined strategies to improve communication and social mobilization, drug coverage monitoring, and rapid assessment of MDA coverage, among others. COVID-19 delayed the implementation of activities in all countries. MDA and TASs were postponed until 2021 and delivery approaches were adapted to the context of the pandemic.
The 2020 regional meeting

Lymphatic filariasis (LF) is a mosquito-transmitted disease caused by *Wuchereria bancrofti*, *Brugia malayi*, and *Brugia timori*, thread-like parasitic worms that damage the human lymphatic system. In 1997, the 50th World Health Assembly approved the resolution WHA50.29 to eliminate LF as a public health problem (1). In 2000, the World Health Organization (WHO) established the Global Programme to Eliminate Lymphatic Filariasis (GPELF) to assist PAHO Member States in achieving this goal. To stop the spread of infection and alleviate suffering among patients, GPELF includes two components: (1) to reduce the prevalence of infection to levels at which it is assumed that transmission can no longer be sustained; and (2) to manage morbidity and prevent disability (2, 3).

In the Region of the Americas, LF endemicity is currently restricted to Brazil, the Dominican Republic, Guyana, and Haiti (4). Regional LF meetings are conducted every two years in the Americas to establish dialogue and consensus between Ministries of Health, partners, and stakeholders in order to coordinate efforts toward the regional elimination of LF as a public health problem.

The 19th Regional Lymphatic Filariasis Elimination Program Managers Meeting and 18th Regional Program Review Group Meeting for the Americas was held 25–26 August 2020. Due to the COVID-19 pandemic, the meeting was held online.

Meeting objectives:

- **Review and discuss** advances, challenges (mainly the ones imposed by the COVID-19 pandemic), and opportunities in mass drug administration (MDA), transmission assessment surveys, morbidity management and disability prevention, elimination dossiers, ongoing surveillance, and other programmatic and technical issues that the endemic countries consider important;

- **Facilitate an exchange** of experiences between LF endemic countries, experts, partners, and donors engaged in efforts to eliminate LF and other neglected infectious diseases (NIDs);

- **Make recommendations** to overcome obstacles and accelerate the process of elimination of the transmission of the disease at national and regional levels;

- **Discuss the possibility** of transitioning from filariasis elimination programs that will end or have ended the MDA to other programs (e.g., soil-transmitted helminths).

Participants included country representatives of Ministries of Health, experts in the elimination and control of NIDs, and key stakeholders (Annex 1). The agenda (Annex 2) included virtual sessions to share the progress and challenges at global, regional, and country level as well as new approaches and lessons learned. This report presents the main aspects discussed and the key recommendations for moving toward the LF elimination goal.
Welcome and opening remarks

Dr. Marcos Espinal (PAHO/HQ) and Dr. Gautam Biswas (WHO/HQ) opened the meeting by welcoming participants, noting the need to be creative and take advantage of opportunities to explore new ways to communicate and move forward in these difficult times. Both acknowledged the progress achieved at global and regional level, supported by the commitment and collaboration of all PAHO Member States and partners. They urged participants to continue working together, empowering countries with collaboration and support from partners, and recalled success in achieving goals to eliminate schistosomiasis and LF in some countries.

LF elimination will reduce suffering and disability and facilitate inclusion of populations living in poverty. LF is a neglected infectious disease, and NIDs are a major contributor to poverty. In particular, morbidity management and disability prevention (MMDP), which is a key component of GPELF, is improving coverage of good-quality health care services and access to safe, effective, and affordable medicines for all populations at risk. NIDs are aligned as part of universal health coverage and integration to other platforms is required to maintain achievements.

Progress is evident at the global level, where the term “neglected tropical diseases (NTDs)” is used, and at the regional level, where the term “neglected infectious diseases (NIDs)” is used. Globally, countries have made remarkable progress: one million people received treatment for NTDs during 2019 and 300 million are not at risk of suffering from NTDs. Forty-one countries have eliminated at least one NTD and many of those countries are located in Latin America and the Caribbean. Countries have achieved these goals with limited resources, but with the support of partners. The global WHO road map on NTDs was updated through a consultative process to define priorities and new goals where water, sanitation, and hygiene activities (WASH) are crucial. It was presented to the World Health Assembly and then presented for discussion during this regional meeting.
Lymphatic filariasis is among 20 diseases targeted by a new road map agreed by the World Health Assembly in 2020. Titled “Ending the neglect to attain the Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030”, the NTD road map is a high-level document and a critical tool that sets strategies, policies, and goals to guide the global response to NTDs over the next decade (5). It is evidence-supported and feasible to achieve. The audience comprises primarily high-level officials of Ministries of Health as well as donors and stakeholders. The 2021–2030 road map replaces the first road map, which was published in 2012. It was generated through an extensive consultation process, led by a project working team in the Secretariat and guided by a Steering Committee comprising regional focal points. Further updates could be required in order to address evolving situations such as the COVID-19 pandemic.

There is a strong interaction between the Sustainable Development Goals and NTDs. Progress in areas such as clean water and sanitation, climate action, and sustainable cities and communities will facilitate achievements of NTD goals; likewise, successful interventions against NTDs can contribute to achieving the Sustainable Development Goals. The road map includes targets that align with the global goals. It also includes fundamental approaches to address NTDs: to impact orientation, holistic, cross-cutting approaches, and country ownership and financing, with NTDs integrated into national health plans and budgets.

The strategic framework of the NTD road map requires countries to accelerate programmatic action, intensify cross-cutting approaches, and change operating models and culture. It includes four cross-cutting themes: integrating delivery platforms and combining efforts across NTDs; mainstreaming within national health systems; coordinating among ecosystem stakeholders and strengthening health systems at country level to improve the capacities to deliver interventions on the ground; and expanding global and regional resources and expertise to support NTD programs.
Session 1: Global and regional progress toward the elimination of lymphatic filariasis

1.1. Overview of global progress toward the elimination of lymphatic filariasis

Jonathan King, World Health Organization

Important achievements toward LF elimination have been accomplished at global level:

Validation of elimination:
- 17 countries have received official acknowledgment from WHO since 2012 for elimination of LF as a public health problem, including Kiribati and Yemen in 2019 and Malawi in 2020.

Scale-up of mass drug administration:
- >7.7 billion cumulative treatments were delivered in 2018;
- 46 of 49 countries are implementing MDA;
- 35 of 49 countries are achieving 100% geographical coverage;
- 90% of implementation units (IUs) report achieving effective coverage (>65% total population);
- 11 countries have implemented MDA using IDA, a triple-drug combination of ivermectin, diethylcarbamazine, and albendazole, within two years of the release of the WHO guideline (6).

The Region is scaling down the transmission assessment surveys (TASs):
- 579 million people no longer require MDA in 52 countries. The Region of the Americas shows the highest proportion of IUs that completed TASs and no longer require MDA;
- 2.1 million Filariasis Test Strips (FTSs) have been procured for 40 countries through coordinated support from GPELF partners.

Global estimates (total persons infected) show significant reductions over time (7):
- At global level, the estimated total persons infected decreased from 198.7 million people in 2000 to 51.4 million in 2018.
- Trends in estimated persons infected by region (from 2000 to 2019):
  - South East Asia Region: 106.8 million to 36.8 million;
  - African Region: 74.8 million to 10.1 million;
  - Western Pacific Region: 8.96 million to 2.57 million;
  - Eastern Mediterranean Region: 3.68 million to 0.98 million;
  - Region of the Americas: 3.12 million to 0.37 million.

These results demonstrate the impact of interventions on the prevalence of LF infection at global level. However, there are differences when comparing the regions, especially Asia and Africa, where estimates of infected persons are the highest.
1.2. Overview of progress toward the elimination of lymphatic filariasis in the Americas

Santiago Nicholls, Pan American Health Organization

The Region of the Americas adopted the "Plan of Action for the Elimination of Neglected Infectious Diseases and Post-elimination Actions 2016–2022" to eliminate and scaleup prevention and control of NIDs (8). It includes four strategic lines of action in order to (1) interrupt transmission and eliminate eight NIDs for which there are cost-effective tools, namely LF, trachoma, Chagas, leprosy, oncocercosis, schistosomiasis, human taeniasis/cysticercosis, and dog-mediated rabies; (2) prevent, control, and reduce the burden of disease of five NIDs for which there are integrated and innovative management tools; (3) assess the epidemiologic situation with respect to other NID-affected groups living in vulnerable conditions; and (4) reduce the risk of recrudescence or reintroduction of any NID in the post-elimination phase.

In 2019, Resolution CD57.R7 was approved to facilitate an integrated framework for disease elimination in the Americas (9), using innovative tools and approaches to facilitate a comprehensive view. This framework and the Sustainable Health Agenda for the Americas 2018–2030 (SHAA2030) are strategic policy instruments that provide direction and political vision for health development in the Region (10).

Regarding LF elimination, the four endemic countries in the Americas are progressing toward the LF elimination goal as follows:

- Brazil is implementing post-MDA surveillance. The country is developing the dossier to request validation by WHO of the elimination of LF as a public health problem.
- The Dominican Republic has only two foci under post-treatment surveillance, La Ciénaga and Southwest (Barahona). In Eastern bateyes (underserved communities of predominantly Haitian sugarcane workers), TAS2 and TAS3 were planned for 2020 and 2022.
- In Haiti, 118 communes out of 140 passed TASs, and 22 communes need to continue implementing MDA. Most of them are in the metropolitan area of Port-au-Prince. More than 80% of the country is in the post-MDA surveillance phase.
- Guyana remapped regions I, II, VI, VII, VIII, and IX to identify endemic units. In 2019, the country implemented MDA using triple-drug therapy (IDA) in all IUs and achieved 100% geographical coverage. The second MDA-IDA was postponed due to COVID-19 and rescheduled for the first term of 2021.
- The four countries have disability management programs in place to treat and support persons suffering from lymphedema or hydrocele. All endemic countries are reporting data on MMDP to provide a minimum package of care for every person with lymphedema and hydrocele in all endemic areas with known patients, but the burden of disease is underestimated. In 2018, the total number of patients with lymphedema reported was 8482 and the number with hydrocele was 3181. Only one country is reporting patients and availability of MMDP by IU (11).

The Region of the Americas continues to face some challenges:

- Overcome financial, logistics, and operational challenges due to the COVID-19 pandemic;
- Achieve effective MDAs coverage in all IUs and sustain 100% geographical coverage;
- Maintain epidemiological surveillance and implement TAS to determine if the elimination goal has been achieved in the remaining endemic foci;
- Improve availability of reliable estimates of the number of patients with lymphedema and hydrocele to plan provision of the basic care package for 100% of the affected population;
- Address the problems of care, disability management, and population exclusion with lymphedema and hydrocele, guaranteeing an appropriate response to their needs;
- Implement and maintain post-elimination surveillance;
- Develop dossiers to provide the evidence required to validate LF elimination as a public health problem in the four endemic countries;
- Ensure sustainability of the achievements, availability of resources, and political support.
Session 2: Country progress toward the elimination of lymphatic filariasis

2.1. Brazil

Daniela Vaz Ferreira, Ministry of Health, Brazil

From 1951 to 1958, a national survey detected indigenous LF cases in 11 municipalities of eight states: Amazonas, Pará, Maranhão, Pernambuco, Alagoas, Bahía, Santa Catarina and Rio Grande do Sul. Mass drug administration or selective treatment in endemic areas started in 2003 and the last MDA campaign was implemented in 2016. Since 2004, LF transmission has been circumscribed to the metropolitan area of Pernambuco in Recife.

Post-MDA surveillance in Brazil includes active surveillance through sentinel sites, spot checks, and TASs in endemic areas of Recife, Pernambuco. In the rest of the areas, each state and municipality is in charge of conducting passive surveillance, supported by the national level.

Brazil has also conducted studies to estimate the burden of the disease and strengthened its capacity to detect, report, and provide care for patients with lymphedema and hydrocele. Vector control, environmental interventions, and health education are key components of the elimination strategy. The dossier to document LF elimination is being developed to be submitted to the Regional Program Review Group.

The COVID-19 pandemic interrupted planned activities during 2020:
- Completion of TAS3 Jaboatão 2;
- Implementation of the agreement process of municipal managers in the organization of a referral network for patients with morbidity;
- Suspension of the activities of the Vector Investigation Project to support proof of the elimination of LF in Brazil (Instituto Aggeu Magalhães – Fiocruz Pernambuco);
- Cancellation of training for doctors and physiotherapists on how to support referral networks for filarial morbidity;
- Activities planned in 2020 to complete the elimination dossier were rescheduled.

Overcoming challenges to achieving elimination in Brazil will require a number of identified actions:
- Implement the network of care services for patients with morbidities in order to strengthen state and municipal partnerships;
- Ensure financial support to research institutions to support LF surveillance and control;
- Define parameters for post-elimination surveillance;
- Define a data recording system for monitoring post-elimination surveillance;
- Create a national system for registration of entomological surveillance;
- Implement the Laboratory Environment Manager system for laboratory monitoring of LF in Pernambuco;
- Support for the development of research to assess the situation and support post-elimination monitoring in the country;
- Implement the LF surveillance system for immigrants.
2.2. Dominican Republic

Manuel González, Ministry of Health, Dominican Republic

A mapping survey in the Dominican Republic started in 1999 and three endemic focal transmissions were identified. MDA using diethylcarbamazine and albendazole (DA) was conducted in the IUs and all of them achieved effective coverage. The country is moving into the post-MDA surveillance phase. The progress is summarized below:

Southwest focus:
- TAS1, TAS2, and TAS3 implemented during 2009, 2014, and 2018 (all reported LF antigenemia below the threshold value).

La Ciénaga focus:
- Three MDA-DA during 2004, 2005, and 2006;

Eastern focus:
- Three MDA-DA during 2014, 2016, and 2017;
- Sentinel sites reported results below 2% antigenemia;
- TAS1 conducted in 2018 passed (0.1%).

In order to move toward LF transmission elimination, the following activities are planned:
- Conduct a national remapping, including areas considered as non-endemic when the program started;
- Maintain post-MDA surveillance to prevent re-introduction of transmission;
- Strengthen morbidity management, especially the surgical treatment of hydrocele;
- Start developing the dossier required to request validation of LF elimination by PAHO/WHO.

2.3. Haiti

Farah-Nelhy Monprévil, Ministry of Public Health, Haiti

The Neglected Tropical Disease Control Programme (NTDCP) in Haiti was launched in 2001 by the Ministry of Health supported by donors and partners. A mapping survey conducted in 2000 identified 140 endemic communes. MDA-DA started in 2000 in Leogane supported by the United States Centers for Disease Control and Prevention (CDC) and The Bill & Melinda Gates Foundation. Since 2009, the United States Agency for International Development (USAID) has been providing technical assistance and resources in the 46 communes with the highest transmission. The NTDCP reached 100% geographical coverage in 2012. By 2018, 118 communes had passed TAS3 and 22 communes continued implementing MDA.

Political unrest in 2019 disrupted the plan of activities and in 2020 the COVID-19 pandemic had a major effect on outreach activities. Initially, MDA in four communes was cancelled: Arcahaie, Cabaret, Croix des Bouquets, and Gonaives. It was cancelled in seven communes thereafter: Port de Paix, Quartier Morin, Milot, Limonade, Cap Haitien, Plaine du Nor, and Acul du Nord. Finally, the country suspended MDA rounds in 12 IUs with very high endemic areas. These communities have been receiving treatment for many years and have everything required to move to the triple medication IDA.

Haiti adopted the IDA regimen to implement MDA delivery strategies as suggested by WHO. The country also updated the National Strategic Plan, which includes IDA for the 19 IUs where MDA is still needed. Haiti is adapting and improving all existing materials, defining the catchment areas (microplanning), and updating communication materials (flyers, banners, and radio spots). It is also reviewing and adapting training material for health staff, community leaders, promoters, and community drug distributors, improving sensitization strategies using the social media and digital solutions, and strengthening the quality of supervision. The initial plan was to start IDA in Leogane.
and Gressier in November 2020, but this will depend on the evolution of the COVID-19 pandemic.

Solutions to a number of challenges have been proposed:

• Strengthen MMDP strategies – the country must improve advocacy to get funding, continue with the burden assessment in the IUs, and integrate the morbidity management into the courses of medical and nursing school;
• Promote advocacy to get funding to integrate vector control for all vector-borne diseases;
• Implement pre-TAS in four communes (Cap Haitian, Dondon, Plaine du Nord, and Cabaret) and TAS1 in one pending commune;
• Start post-MDA surveillance in the IUs that passed TAS1 in 2014, 2015, 2016, and 2017;
• Conduct validation of elimination – start compiling all data sources and put in place the task force to start developing the dossier.

2.4. Guyana

Reza Niles, Ministry of Health, Guyana

In 2018, Guyana renewed its Plan to Eliminate Lymphatic Filariasis with an updated framework and timeline to achieve the elimination goal by 2026. A remapping survey was conducted in 2018–2019 in the six MDA naive regions, 18 years after the first mapping exercise, to provide the information required to decide if these areas, or any subunit, were endemic. Four out of six regions were found with focal or more disperse LF transmission. MDA-IDA 2019 included the four “mature” IUs (III, IV, V, and X) and the four endemic regions identified in the remapping survey (I, II, VI, and VII). The opportunity to use IDA would allow the country to implement two rounds of preventive chemotherapy in all endemic areas, starting in 2019.

MDA-IDA 2019 achieved 100% of geographical coverage. All eight IUs achieved above the recommended 65% epidemiological coverage, with the highest in Region VII (97%) and the lowest in Region X (68%), giving an overall coverage of 75% at national level. MMDP reported 205 lymphoedema cases and five hydrocele cases in 2019. All IUs have known cases but only one designated health facility is available at national level to provide the recommended minimum package of care.

To move toward LF elimination, Guyana works to establish and maintain the following conditions:

• Ensure full geographical coverage (100%) of all endemic areas;
• Provide access to basic recommended care;
• Reduce the frequency and intensity of episodes of adenolymphangitis;
• Reduce the number of new cases of lymphedema, elephantiasis, and hydrocele, through the interruption of parasite transmission;
• Ensure LF elimination is fully integrated into the primary health care system.

The COVID-19 pandemic pushed the national program to postpone the IDA campaign from October 2020 to March 2021. The next MDA-IDA is expected to be more expensive, because additional resources will be needed to provide the field team with personal protective equipment and to implement a more aggressive mobilization campaign to combat the fear of COVID-19 transmission due to MDA. Social mobilization activities will be adapted to the pandemic context and training for staff and pill distributors will make use of online learning platforms following physical distancing and COVID-19 guidelines. Tactics to reach the target populations will consider the pros and cons of the strategy, such as reaching populations through fixed points, schools, workplaces or households, etc. Future needs and challenges include strengthening MMDP, ensuring effective MDA-IDA coverage in all IUs, providing direct support with pre-TASs and TASs, and preparation of the country dossier.
3.1. Implementing MDA using IDA: Experience and lessons learned in Guyana

Implementing MDA using IDA in Guyana has provided important lessons learned:

- Regional ownership was proportionate to regional performance. A standardized organization and roles of the teams at national, regional, and local level was crucial for implementing the campaign and coordinating key sectors such as education as well as partners, stakeholders, religious, and community leaders.
- Morale-building facilitates teamwork and reinforces commitment and participation at all levels.
- An acceptability assessment of the triple-drug therapy was useful to understand and address perceptions and concerns as well as opportunities expressed at a local level that could affect MDA coverage.
- A cascade approach was very useful to train staff at all levels (national, regional, and local) and pill distributors in all IUs. Health workers were trained according to their roles to support all sub-components of the LF program.
- The microplanning process was a key element of success. It started at health center level, supported by Regional Officers and national teams to validate target populations, analyze data, and monitor progress of the MDA-IDA.
- Strong supportive supervision was crucial to identify and solve problems on time.
- Social mobilization combining communications approaches and integrating different channels was implemented through the mainstream media. Participation of stakeholders and leaders, and intersectoral efforts (e.g., engaging the Ministry of Education), had a ripple effect through peer-to-peer conversations and shared learning experiences.
- Risk management and risk communication strategies are needed to foster confidence, reduce fears of side effects, and promote adherence to medications.

3.2. The importance of microplanning tools for MDA campaigns

Lessons learned from microplanning during immunization campaigns provided tools that were adapted in the Americas for the implementation of MDA campaigns to eliminate NIDs. Microplanning uses a “bottom-up” approach where all levels must be involved to identify and solve service delivery problems, make the plan of action, estimate resources needed and available, and monitor and follow up on the progress of MDA. A well-formulated microplan aims to reach all target populations.

A stepwise process has been used to implement microplanning, including: (1) mapping the catchment area; (2) estimating the target population; (3) planning the tactics to reach the target population; (4) estimating resources and logistics; and (5) monitoring and using data for action.

Based on the local situation and knowledge of health staff and leaders of their own reality, microplanning identifies feasible solutions to the critical issues to ensure that target populations are reached. The process creates links through social communication, partnering with communities to promote uptake of the medicines, and delivering services.
Mixed tactics selected according to the local context must be implemented to reach target populations in fixed points, schools, and workplaces, among others. This is followed by mop-up house to house and rapid tools to verify MDA coverage in each IU. Supportive supervision is a key operational component to facilitate regular on-site teaching, feedback, and follow-up with health staff. Monitoring and use of data for action are crucial to achieving effective MDA coverage.

**Conclusion:** Microplanning is a key tool for the success of MDA because service delivery works best when health facilities are empowered to analyze their local reality using their own data to define the most effective tactics to reach their target populations. Based on the regional experience, the Americas are currently developing microplanning guidelines and tools to implement MDA.

### 3.3. Considerations for achieving effective MDA-IDA coverage: How acceptability assessments can help to achieve high coverage

*Alison Krentel, University of Ottawa, Bruyère Research Institute, Canada*

Assessments measuring treatment acceptability provide a more nuanced understanding than coverage rates or knowledge/attitude data as a measure of population receptiveness to a health intervention (MDA) and provide information to determine the feasibility of an intervention. If an acceptability assessment is carried out pre-MDA, results can provide information to help the program to be more responsive to current trends and guide the development of tailored messaging.

Components of acceptability are: (1) agree that the treatment is efficacious against LF worms, scabies, and soil-transmitted helminths (STH); (2) would take the treatment again; (3) would change household routine to take it again; (4) liked the treatment; (5) would recommend it to family and friends; (6) agree that treatment is a good way to help our health problems here; (7) agree that it will help my community; (8) agree that the treatment is safe; and (9) agree that the treatment is important for personal health.

Multiple countries have implemented acceptability assessments in relation to the use of IDA or DA: Côte d’Ivoire, Fiji, Guyana, Haiti, India, Indonesia, Kenya, Papua New Guinea, and Uganda. In all study sites, location is a strong predictor of acceptability. In a five-country acceptability study carried out during the community-based safety trial, the strongest association with acceptability was country. Regional differences in acceptability have been used to help programs to assess where those differences lie and then tailor a response in terms of social mobilization and community engagement.

- In Kenya, post-MDA respondents were 1.24 times more likely to be accepting of MDA than pre-MDA respondents \(p=0.0031\). Higher acceptability post MDA-IDA was associated with people who have previously taken the triple-drug therapy (which is delivered in pills/tablets) versus those who have never taken the pills/tablets before (systematic noncompliance), and people who report being concerned about LF personally, believing LF medicine is important/very important for health and that participation in MDA is very important for their community.

- In Guyana, Regions III and V reported consistently lower levels of knowledge and higher proportions of “don’t knows” across key variables. On the other side, Region IV (Georgetown) reported some of the highest levels of understanding about LF and its transmission. Region III and IV have the highest numbers of self-reported systematic non compliers.

**Conclusion:** Measuring acceptability provides a nuanced understanding of MDA that helps to explain reported coverage and can help to assess the effectiveness of MDA and MDA-IDA. Pre-MDA acceptability studies can inform MDA rollout. Programs can use results to be responsive to new community developments and tailor social mobilization effectively.
4.1. Assessing the burden of lymphatic filariasis morbidity and planning for a minimum package of care

Caitlin Worrell, CDC

The Global Programme to Eliminate Lymphatic Filariasis (GPELF) is rooted in compassion and ultimately aims to prevent suffering and improve the lives of those suffering from LF. The ultimate program objective is 100% geographical coverage of services in all areas with known patients. Three MMDP indicators must be met: (1) know the burden of LF disease in the country; (2) provide access to the basic package of care for all lymphedema and hydrocele patients; and (3) ensure that the provided basic health care is of good quality.

The first step is to conduct the situation analysis to understand the context for planning an MMDP program, plan for service provision and identify opportunities for integration. It is important to find opportunities for patient estimation to understand the location of LF cases. While there is no single recommended survey, several patient estimation strategies are suggested such as: population-based cross-sectional surveys (MDA coverage surveys, TASs, community-based or other surveys such as Multiple Indicator Cluster Surveys); health facility surveys; key-information interviews (TAS school-based, community, and health facility key informants); and other methodologies (door-to-door morbidity census, pre-MDA population survey, and MDA).

The results burden assessment should be used to ensure that the minimum package of MMDP care is available in all areas where cases of lymphedema or hydrocele are identified. The recommended minimum package includes: (1) treating acute attacks; (2) managing lymphedema; (3) managing hydrocele; and (4) providing anti-filarial medicines. Lymphedema quality management is a key element that should be included in the planning and provision of care in areas such as staff training, case management, education materials, water infrastructure, medicines and commodities, patient tracking system, and staff knowledge.

**Conclusion:** Quality of care must also be ensured, and there are available tools such as the direct inspection protocol (DIP) to assess the quality of services, including 14 indicators in the scoring. The purpose of DIP is to provide information to make decisions to improve the quality of health services. It is recommended to have a baseline score and apply it periodically at least once in the two years prior to dossier submission. There are also guidelines to assess hydrocele quality. New resources will be available soon.
4.2. Experiences and lessons learned from assessing the burden of lymphatic filariasis

Emily Toubali, USAID

A multi-country survey was conducted in 12 countries to assess time, costs, and key learning about using MMDP methods and tools. A decision tree was developed to explore the best platform: if MDA or TASs are ongoing in the country, these are feasible options to collect data required to estimate LF patients. Otherwise, tools such as active case finding, key informant questionnaires, compiling existing data, or stand-alone MMDP surveys can be used. Participating countries reported as a key learning that it is important to discuss the pros and cons of the different platforms up front, to determine which approach is best for the country context.

Costs and time varied depending on the method used to estimate patients. Countries found it useful to develop a job aide, using local photos and vocabulary to describe lymphedema and hydrocele and discussing the availability of services, or plans for future availability of services, with community members at the time of data collection.

Implementing the situation analysis in the countries required from one to seven days per IU and DIP took one to three hours to assess each health facility. Using these two tools helped to shape LF MMDP service provision at various stages in the countries. It is recommended to collect this information when activities start, mid-stream, and immediately prior to dossier submission. It is practical to explore a combination of these tools with other assessments.

WHO tools to support the MMDP component that are currently available to estimate the burden of LF include situation analysis and DIP. Useful materials can be accessed from: https://www.ntdtoolbox.org/.

**Conclusion:** MMDP data collection methods and tools are useful, feasible to implement, and, in most cases, cost-effective. Data have multiple uses and are invaluable for people with hydrocele and lymphedema, health systems, and the country validation dossier. Different approaches work best for different countries. It is useful to hold up-front discussions about the most acceptable approaches for the country. An important lesson learned is to start collecting data “now”.

4.3. Guidelines to ensure the validation criteria are met for morbidity management and disability prevention

Charles Mackenzie, Task Force for Global Health

Knowing the burden of LF is a necessary aspect of understanding where best to locate LF MMDP services and to promote advocacy. There is not a simple or best approach. Mixed sources of data (some of them more useful than others) can be used to estimate LF cases, e.g., an active survey of health workers and patients, hospital records, and MDA surveys, among others.

The recommended minimum package of care includes: (1) MDA or individual treatment to destroy any remaining adult parasites and microfilaria; (2) surgery for hydrocele; (3) treatment for episodes of adenolymphangitis; and (4) management of lymphedema to prevent both progression of disease and episodes of adenolymphangitis. Others can be added to improve quality of services (e.g., rehabilitation, mental health).

Quality can be assessed by interviewing patients to ascertain acceptance and +/- medical changes and the degree of care they have received; evaluating the degree of training, capabilities, and ongoing activities in the health center; or through regular communication with implementers and patients. To ensure sustainability, the basic package of care needs to be integrated into the national public health system in the long term.
Data about MMDP should be reported and must be documented in the dossier. It includes the number of patients (lymphedema and hydrocele) estimated by the IU; the number of facilities designated to provide recommended care serving IUs with known cases; and an assessment of the readiness and quality of services provided in designated facilities.

WHO has developed guidelines such as the WHO LF Tool-Kit, which includes resources for planning, patient estimation, and capacity-building to deliver MMDP services for hydroceleectomy and lymphedema management and documentation of MMDP services; dossier development guidelines; and reporting forms. Publications on MMDP that provide useful information can be accessed from the online NIH library.

**Conclusion:** Creating the dossier should be started as soon as possible. It is recommended to delegate someone to focus on the MMDP documentation and text. Dossier assessors must be convinced that the national program genuinely cares for LF patients by describing successful experiences and best practices to improve the care of patients to “document” the patient’s activities and comments. The key to success is using these remarkably simple approaches to have a positive impact on patients’ lives.
Session 5: Next steps after mass drug administration is suspended

5.1. Transition from the lymphatic filariasis elimination program to another elimination program: the case of soil-transmitted helminths

Denise Mupfasoni, WHO

WHO recommendations on STH include:

• Preventive chemotherapy for all children (1–15 years of age) living in areas where the baseline prevalence of any STH infection is 20% or higher;

• Preventive chemotherapy for all non-pregnant adolescent girls (10–19 years of age) and non-pregnant women of reproductive age (15–49 years of age) living in areas where the baseline prevalence of any STH infection is 20% or higher;

• Preventive chemotherapy for pregnant women, after the first trimester, living in areas where both: (1) the baseline prevalence of hookworm and/or *Trichuris trichiura* infection is 20% or higher; and (2) anemia is a severe public health problem.

The distribution of albendazole during the LF elimination program has a significant impact on STH. In 2018, more than 15% of school-age children in need of deworming received albendazole through LF campaigns. In some countries, the albendazole distributed by the LF program is sufficient to reach an extremely low prevalence of STH, but a survey is needed to predict the impact on STH and understand the epidemiological situation. Considering the current progress of LF elimination programs in the Americas and the planned TAS or remapping, the four endemic countries can be organized to conduct integrated STH surveys during TASs.

The collection and analysis of fecal specimens for STH evaluation can be conducted at the same time as the TAS with limited additional costs using the same survey design. Two laboratory methods can be used according to the situation: Kato-Katz and Mini-FLOTAC. WHO has developed manuals to support the collection of STH data during TASs.

**Conclusion:** The global progress of STH control is good and LF elimination programs are contributing significantly. For STH control, it is important to conduct an impact survey assessment after more than five years of deworming, to reduce cost and save drugs. Surveys can be conducted simultaneously with TAS and will give direction on STH control activities to be taken when the LF program is terminated. Once the LF program has stopped and there is a need for the STH control program to continue, integration with other existing programs should be an option to explore.
5.2. COVID-19 and the impact on the elimination process

Jonathan King, World Health Organization

The COVID-19 pandemic is having a significant impact on the GPELF, such as skipped rounds of MDA, delayed pre-TASs and TASs, delayed program decision-making, expired diagnostic tests and medicines, and delayed research studies (i.e., IDA monitoring and evaluation). In April 2020, WHO issued an interim guidance for NTD programs, recommending the postponement of all community outreach campaigns, including MDA, community-based surveys, and active case finding for NTDs (13). An updated document intended for health authorities, NTD program managers, and their supporting partners was also released in July 2020 providing a decision-making framework that proposes a two-step approach: a risk–benefit assessment, to decide if the planned activity should proceed; and an examination of a list of precautionary measures that should be applied with the aim of decreasing the risk of transmission of COVID-19 associated with the activity, and strengthening the capacity of the health system to manage any residual risk (14).

To assess the impact of the COVID-19 pandemic on LF, a model-based analysis was conducted to estimate how long NTD interventions could be postponed before progress toward the 2030 goals is affected adversely. The main conclusion is that the longer the delay to the scheduled MDA, the greater the possibility of a resurgence in infection and the more rounds of treatment that will be required to reach 2030 disease targets. The impact also depends on the prevalence level of infection and the level of DA coverage achieved during MDA. In low-prevalence settings (5–10%), the time to the goal if no interruption is 5.84 (4–16) years; if the first MDA round is missed and the gap between MDA rounds is two years, the delay to the goal would be +0.92 (0–3) years; but if the gap is three years, the delay to the goal could be +1.84 (0–4) years.

It is recommended to revise national implementation plans under more than a single scenario and, for IUs where activities have been postponed, to propose new dates based on current risk assessment and restrictions. Plans must determine whether resources are in place to support the activities with mitigation measures on the tentative new dates and estimate the quantities (if any) of medicine or diagnostic tests that will expire and will need to be replaced to avoid delays. Take this time to gather data for and prepare elimination dossiers. Finally, it is crucial to ensure available care for persons with lymphedema and hydrocele.
Way forward

1. The Region of the Americas is on track to reach the LF elimination target. This progress is a result of joint effort supported by hard work, commitment, and collaboration among all countries and partners. Strengthening inter-programmatic coordination and integrating surveillance and health network platforms is crucial to achieve LF goals and sustain elimination targets.

2. Nevertheless, countries still face significant challenges in meeting the LF goal, and the COVID-19 pandemic is causing significant disruption to NTD programs. To reach the goal, good-quality MDA campaigns need to be implemented in the remaining endemic units, followed by transmission surveys as recommended. Access to the basic package of care must be guaranteed in every IU with known patients.

3. To mitigate the impact of COVID-19 on LF elimination planned activities, it is recommended to follow WHO interim considerations and use the decision-making framework to take precautionary measures that should be applied, with the aim of decreasing the risk of transmission of COVID-19 associated with implementation of MDA and TASs and post-MDA surveillance in the context of the pandemic.

4. MMDP is a component that needs to be reinforced. Estimation of burden of disease requires combined sources of data, as mentioned in the meeting presentations. Available manuals and tools are recommended. It is also very important to improve the systematic reporting of cases detected by active search and in the health services.

5. IDA is warranted in the Americas according to WHO recommendations. Each country must follow the WHO guidance and recommendations and the Guide for Donations of Mectizan® to Accelerate the Elimination of Lymphatic Filariasis.

6. Lessons learned and tools used to implement MDA campaigns such as microplanning and acceptability assessments are useful and their use must be encouraged for administering preventive chemotherapy during NTD campaigns.

7. Discussion in the meeting highlighted relevant topics about specific aspects of LF elimination progress in the countries:
   - It makes sense to postpone the second MDA-IDA in Guyana. It is a wise decision to plan ahead to implement a high-quality campaign.
   - Congratulations to Brazil for their hard work on the dossier and implementing post-MDA surveillance. We all will learn from their experience.
   - The remapping survey planned in the Dominican Republic is a very interesting strategy supported by data that also will provide important lessons learned.
» Cross-border surveillance between the Dominican Republic and Haiti is very important. It was implemented during malaria research but it is no longer conducted because the project finished. Nevertheless, samples have been analyzed in migrants where filarial transmission was detected and all results have been negative.

» Follow-up of positive LF children, their families, and communities in the countries is a key condition during post-MDA surveillance. All positive FTS must be investigated, including a night visit to take a microfilaremia blood smear and, if feasible, determine the level of antibodies.

» Filariasis Test Strip donations to support pre-TASs and TASs will continue being provided to countries using the established procedures.

» All LF programs must start or continue to document the information required for the LF elimination dossier.

The regional meetings reaffirmed the commitment to eliminating LF, which is one of the leading causes of global disability and can lead to painful, disfiguring, and psychologically damaging conditions (lymphedema and hydrocele). LF can lead to rejection and social stigma, with a subsequent loss of self-esteem and fewer job opportunities for infected individuals, which can negatively impact their economic livelihoods and social status. Its eradication is feasible and, despite the constraints imposed by the COVID-19 pandemic, progress toward the goal continues.
References


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Annex 2: Agenda

### 25 August 2020 – Virtual Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Content</th>
<th>Presenter</th>
</tr>
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<tbody>
<tr>
<td>08:30–08:40</td>
<td>Instructions about the virtual meeting</td>
<td>Dr. Ronaldo Scholte, PAHO</td>
</tr>
<tr>
<td>08:40–09:10</td>
<td>Opening remarks</td>
<td>Dr. Marcos Espinal, PAHO</td>
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<tr>
<td></td>
<td>PAHO / Regional Office</td>
<td>Dr. Gautam Biswas, WHO</td>
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<td>WHO / HQ</td>
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<tr>
<td>09:10–09:15</td>
<td>Review of meeting objectives and agenda</td>
<td>Dr. Santiago Nicholls, PAHO</td>
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<tr>
<td>09:15–09:30</td>
<td>NTD road map 2030 (15 min)</td>
<td>Dr. Gautam Biswas, WHO</td>
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<td></td>
<td><strong>Session 1: Introductory session: Global and regional progress toward the elimination of LF</strong>&lt;br&gt;<strong>Moderator: Dr. Ronaldo Scholte</strong></td>
<td></td>
</tr>
<tr>
<td>09:30–09:45</td>
<td>Overview of global progress toward the elimination of lymphatic filariasis as a public health problem (15 min)</td>
<td>Dr. Jonathan King, WHO</td>
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<tr>
<td>09:45–10:00</td>
<td>Overview of progress toward the elimination of lymphatic filariasis as a public health problem in the Americas (15 min)</td>
<td>Dr. Santiago Nicholls, PAHO</td>
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<tr>
<td>10:00–10:10</td>
<td>Questions and discussion (10 min)</td>
<td>Plenary</td>
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<tr>
<td>10:10–10:20</td>
<td>Coffee break</td>
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<tr>
<td></td>
<td><strong>Session 2: Country progress toward elimination of lymphatic filariasis as a public health problem</strong>&lt;br&gt;<strong>Moderator: Dr. Ronaldo Scholte</strong></td>
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<tr>
<td>10:20–10:45</td>
<td>Progress in Brazil on transmission assessment surveys, implementation, morbidity management, ongoing surveillance, update on the dossier, and the impact of COVID-19 on the program (25 min)</td>
<td>Dr. Maria de Fátima Costa Lopes and Mrs. Daniela Vaz Ferreira, Ministry of Health, Brazil</td>
</tr>
<tr>
<td>10:45–11:10</td>
<td>Progress in the Dominican Republic on transmission assessment surveys, implementation, morbidity management, dossier preparation, ongoing surveillance, update on the remapping initiative, and the impact of COVID-19 on the program (25 min)</td>
<td>Dr. Manuel González, Ministry of Health, Dominican Republic</td>
</tr>
<tr>
<td>11:10–11:35</td>
<td>Progress in Haiti on mass drug administration, transmission assessment surveys, implementation, morbidity management, dossier preparation, ongoing surveillance, IDA implementation plan, and the impact of COVID-19 on the program (25 min)</td>
<td>Dr. Marc Aurele Telfort, Ministry of Health, Haiti</td>
</tr>
<tr>
<td>11:35–12:00</td>
<td>Progress in Guyana on mass drug administration, implementation, morbidity management, dossier preparation, ongoing surveillance, future needs to achieve elimination, and the impact of COVID-19 on the program (25 min)</td>
<td>Dr. Reza Niles, Ministry of Health, Guyana</td>
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<tr>
<td>12:00–12:30</td>
<td>Discussion on the progress and challenges toward LF elimination in the Region of the Americas (30 min)</td>
<td>Plenary</td>
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### 26 August 2020 – Virtual Session

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<tr>
<th>Time</th>
<th>Content</th>
<th>Presenter</th>
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<tbody>
<tr>
<td><strong>Session 3: Tools to achieve elimination</strong>&lt;br&gt;Moderator: Dr. Martha Saboya</td>
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<tr>
<td>08:30–08:45</td>
<td>Implementing MDA using IDA: Experience and lessons learned from Guyana (15 min)</td>
<td>Dr. Reza Niles, Ministry of Health, Guyana</td>
</tr>
<tr>
<td>08:45–09:00</td>
<td>The importance of microplanning tools for MDA campaigns (15 min)</td>
<td>Dr. Ana Morice Trejos, PAHO/HQ</td>
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<tr>
<td>09:00–09:15</td>
<td>Considerations for achieving effective MDA/IDA coverage: How acceptability assessment studies can help to achieve high coverage (15 min)</td>
<td>Dr. Alison Krentel, University of Ottawa, Bruyère Research Institute</td>
</tr>
<tr>
<td>09:15–09:35</td>
<td>Discussion (20 min)</td>
<td>Plenary</td>
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<tr>
<td>09:35–09:50</td>
<td>Coffee break</td>
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<tr>
<td><strong>Session 4: Morbidity management, disability prevention, and inclusion</strong>&lt;br&gt;Moderator: Dr. Santiago Nicholls</td>
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<tr>
<td>09:50–10:05</td>
<td>Assessing the burden of LF morbidity and planning for the minimum package of care (15 min)</td>
<td>Dr. Caitlin Worrell, CDC</td>
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<tr>
<td>10:05–10:20</td>
<td>Experiences and lessons learned from assessing the burden of LF (15 min)</td>
<td>Mrs. Emily Toubali, USAID</td>
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<td>10:20–10:35</td>
<td>Guidelines to ensure that validation criteria are met for MMDP (15 min)</td>
<td>Dr. Charles MacKenzie, Task Force for Global Health</td>
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<tr>
<td>10:35–11:00</td>
<td>Discussion (25 min)</td>
<td>Plenary</td>
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<tr>
<td><strong>Session 5: Next steps after the MDA is suspended</strong>&lt;br&gt;Moderator: Dr. Ana Morice Trejos</td>
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<td>11:00–11:15</td>
<td>The transition between the filariasis elimination program to another elimination program: the case of soil-transmitted helminths (15 min)</td>
<td>Dr. Denise Mupfasoni, WHO</td>
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<td>11:15–11:30</td>
<td>COVID-19 and the impact on the elimination process (15 min)</td>
<td>Dr. Jonathan King, WHO</td>
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<td>11:30–12:15</td>
<td>Discussion (45 min)</td>
<td>Plenary</td>
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<tr>
<td>12:15–12:30</td>
<td>Closing remarks (15 min)</td>
<td>PAHO/WHO</td>
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Lymphatic filariasis is on track for elimination in the Region of the Americas, where four countries are intensively implementing the Global Programme to Eliminate Lymphatic Filariasis (GPELF), launched in 2000 by the World Health Organization. Globally, the number of people estimated to be infected has decreased from 198.7 million in 2000 to 51.4 million in 2018.

Progress and challenges in Brazil, the Dominican Republic, Guyana and Haiti were the focus of a regional meeting in August 2020 organized by the Pan American Health Organization (PAHO). This report presents new approaches, lessons learned, and key tools to achieve elimination, such as microplanning for mass drug administration, acceptability assessment surveys, social mobilization, and strengthening morbidity management.