

Explorative Research to Inform a Model for Full Integration of Lymphatic Filariasis and Deworming MDA with Learnings from the Pulse Polio Campaign in India

PATH India and the Health Campaign Effectiveness Program at The Task Force for Global Health

Key Messages

PATH conducted an exploratory study of collaborative planning approaches for integrated health campaigns in Uttar Pradesh, India. The aim was to inform development of a model of full integration for mass drug administration (MDA) campaigns for lymphatic filariasis (LF) and soil-transmitted helminthiases (STH), and integrate learnings from the Pulse Polio campaign. The following lessons learned were uncovered during the study:

- Learnings from a successfully executed campaign (for example, the Pulse Polio immunization program's use of daily briefings with field staff and officials) can improve the quality of an integrated campaign.
- Prior experience with successful integration activities can pave the way to expanding integration processes to other health campaigns.
- A single strategy for integration may not be applicable in all geographical regions (e.g., urban vs. rural), or with all types of campaigns.
- Planners should gain holistic views of stakeholders at all levels, including their priorities, barriers, and enablers.
- Coordination between the vertical programs that manage individual campaigns can lead to streamlined planning and coordinated implementation of the integrated campaign.
- Data management varies for each standalone campaign, therefore effective data management strategies that meet the needs of the integrated campaign must be developed.
- Budgetary issues and remuneration of health workers present a challenge and must be addressed during the pre-planning and planning process. An increase in the workload of the FLWs without an increase in remuneration could hinder the success of an integrated campaign.
- Concerns about adverse drug reactions must be identified, acknowledged, and addressed because these are one of the most common reasons for drug refusal amongst the community.
- Supervision of field activities is often regarded as the weakest link of campaigns. Care must be taken to ensure that supervision of field activities in an integrated campaign is adequate without overworking field workers.
- Supply chain and logistics processes should be harmonized for both programs, especially with respect to timing of procurement and sending commodities to the state and block levels.

Abstract

Health campaigns are commonly deployed strategies for tackling high-priority public health issues. Campaigns are commonplace and numerous in India, including immunization campaigns, mass drug administrations (MDA) for lymphatic filariasis (LF) and soil-transmitted helminths (STH), indoor residual spraying for visceral leishmaniasis (VL), malaria, polio and other immunizations. Integration of two or more of these campaigns can facilitate synergies between different disease-specific activities in the same geographies, potentially reducing the need for multiple house visits by the same frontline health workers (FLW) in their communities. Collaborative campaigns can also foster sharing of resources and learnings across programs, development partners, and donors and generate much-needed evidence to advocate for realignment of policy at global and national levels.

The purpose of this exploratory study is to identify, support, and document collaborative planning approaches for integrated health campaigns. This study aimed to inform the Government of India on the development of a model for full integration of MDA campaigns for LF and STH. It also seeks to facilitate learning from the Pulse Polio campaign, along with sharing promising practices in collaborative planning.

The study team interviewed at national, state, district, and block levels to identify the enablers and barriers for the integration of MDA for LF and STH, as well as block medical officers and FLW, such as auxiliary nurse midwives (ANM). At the village level, the study team interviewed accredited social health activists (ASHA) and Anganwadi* workers (AWW) to understand the perspective of campaign personnel at the field level. Program experts from the Pulse Polio campaign were interviewed to understand how the learnings from this successful immunization campaign could be effectively utilized to create a robust integrated campaign for LF and STH MDA.
**Rural childcare centers in India.*

Participants identified the following enablers of integration.

1. Microplanning is similar in process and detail for both LF and STH campaigns, and practices were adapted from the Pulse Polio campaign.
2. The same field workers implement LF and STH MDA and know the populations.
3. Both campaigns conduct similar planning, implementation, and post-implementation activities.
4. Public acceptance for integration is perceived to be high in the community.
5. Partners participate in advocacy, capacity building, monitoring and evaluation (M&E), and communications campaigns.
6. Combined messaging and shared platforms for communications achieves expanded reach of both interventions.
7. A robust M&E plan including a supportive budget and human resources.
8. Campaign integration benefits from LF and STH drug availability and similar logistics to distribute them.

Participants described the following barriers to integration.

1. LF and STH MDA programs are owned by different departments, and there is a lack of interdepartmental coordination.
2. Data reporting and recording processes by field workers vary across campaigns.

3. LF and STH MDAs are conducted in different settings, and training modules for health workers vary.
4. Limited budgets are available for training, information, education, and communication (IEC), social mobilization, and increased field worker remuneration.
5. Fears of adverse drug reactions (ADRs) may cause drug refusal; poor management and response to ADRs may damage program success.
6. Auxiliary nurse midwives who act as supervisors are overloaded with routine work, resulting in poor quality of supervision.
7. Procurement of drugs is done by different departments which results in uncoordinated supply and logistics processes.

The interviews with participants also allowed for the development of a shared definition of ‘campaign integration’ based on the input of all participants:

“Integration is [a] process of combining components for a specific program, designed to address a specific disease or health need, with another health program; and support in maintaining ongoing interventions in a synchronized and harmonious way. This also includes [bringing] cross-cutting opportunities from both campaigns to make the [integrated] campaign efficient and effective.”

The following promising practices were developed during this case study, and can inform the integrated campaign being planned for LF and STH MDA.

1. Develop microplans for the integrated campaign that are similar in process and detail to microplans that have been used successfully for standalone campaigns.
2. Identify campaigns to be integrated that campaign workers know well, in terms of processes for planning, implementation and post-implementation.
3. Develop a communication strategy that addresses both diseases/interventions and uses one communication platform, and amplifies information, education, communication and behavior change communication.
4. Use an integrated training module for frontline health workers and supervisors to reduce the time needed to train each worker.
5. Develop a single monitoring tool that harmonizes and aligns key aspects of each campaign.
6. Embrace the practices and learnings from prior, highly successful campaigns.
7. Digitize household enumeration to lessen the future workload of field workers.
8. Compare and merge family/household/population registers during the microplanning process.

Background

Health campaigns are the most commonly deployed strategy for tackling high priority public health efforts, such as immunization, MDA for STH and LF, indoor residual spraying for VL and malaria, active surveillance for neglected tropical diseases (NTDs), and control of tuberculosis, vaccine preventable diseases, Hansen’s disease, and most recently, SARS-CoV-2. In India, campaigns for several diseases, such as polio and STH are conducted countrywide, and in specific regions where LF, VL, and Japanese encephalitis are endemic. In almost all of these campaigns, the same workforce are involved in planning, implementation, and management, and the same communities are reached at different points of time.

LF is a serious public health problem in India, representing 40 percent of the global burden of the disease. It is endemic in 257 districts across 16 states and five union territories, and approximately 630 million people residing in these endemic areas are at risk of developing the disease.(1,2). Currently, 100 districts out of 257 endemic districts are in a post-MDA surveillance phase, and the remaining 157 districts are either implementing MDA or preparing for the transmission assessment survey.

The World Health Organization estimates that 241 million children in India aged 1-14 years (68% of this age group) are at risk of parasitic intestinal worms, also known as STH. This number represents approximately 28% of all children estimated to be at risk of STH infections globally (3).

MDA is one of the major strategies to eliminate LF. Chemoprophylaxis is provided either through double drug (albendazole and diethylcarbamazine citrate (DEC)) or triple drug (albendazole, DEC, and ivermectin) therapy. The drugs are given to everyone above two years of age. Albendazole is also the chemoprophylactic drug given for the STH MDA campaign.

The Global Program for the Elimination of Lymphatic Filariasis aims to eliminate LF through time-limited MDA programs. STH control activities are more diffused, aiming to piggy-back deworming onto existing services, such as school health activities. Controlling morbidity instead of eliminating infection is the stated goal of STH MDA campaigns (4).

LF and STH MDA are perfect candidates for integration due to many commonalities in their campaigns, and due to the need to effectively manage resources during the COVID-19 pandemic. In fact, India's 2015 Operational Guidelines for Deworming state that STH control activities should be integrated with LF activities in all LF-endemic districts (5). However, states have not followed these guidelines, and both campaigns have been conducted separately across the country.

The COVID-19 pandemic has led to a decrease in the field activities resulting in deferral or cancellation of planned campaigns. Health workers are far less likely to visit target beneficiaries' homes to provide health services including LF MDA. Furthermore, MDA for STH has not been conducted in the country in the last two years as it is mainly school-based, and all schools have been closed during the pandemic*. Therefore, integration of different campaigns targeting the same populations has become paramount so that multiple health interventions can be provided in a single visit, and to improve coverage of STH MDA following school closures.

**Schools were reopening as of September 2021.*

The following similarities across LF and STH campaigns demonstrates why integration is possible, and even ideal:

- The same set of FLW are involved in these campaigns.
- Visits are made to the same households in the same communities.
- Reaching out to vulnerable populations is a priority for most of these campaigns.
- The integration would bring in operational efficiency in both campaigns.

- Chemoprophylaxis for STH (albendazole) is already part of the multi-drug regimen administered in the LF campaign.

The following table enumerates the similarities and differences among the two campaigns.

Table 1: Similarity and differences in MDA campaigns for LF and STH

	Lymphatic filariasis	Soil-transmitted helminths
Seasonality of disease	Increases mainly after rainy season	Increases mainly after rainy season
Geography	Conducted in endemic areas	Conducted pan-India
Frequency of campaigns	Once a year	Mainly twice a year
Target group	Everyone >2 years of age	Among 1-19 years of age
Campaign strategy	Mainly house-to-house, but schools are also covered	Mainly school-based. Out-of-school children are covered through house-to-house
Human resources in field	Auxiliary nurse midwives (ANM), accredited social health activists (ASHA), Anganwadi** workers (AWW)	Teachers, ANM, ASHA, AWW
Drugs given	Albendazole, DEC, and ivermectin*	Albendazole

*In a few districts

**Rural childcare centers in India

The integration of both campaigns would result in the optimal utilization of drugs, logistics, and human resources, and create synergy among the program activities. Integration would also make campaigns more cost-effective and improve community outreach. The funding for communication and social mobilization would also be cost-shared.

However, campaign integration may be hindered due to lack of political will at the national and state level and by public health emergencies, such as the COVID-19 pandemic. Furthermore, since the LF campaign is limited to only endemic districts and conducted once a year, whereas STH campaigns are conducted twice annually across all districts, policy makers and program officers may have diverse opinions on whether the campaigns should be integrated.

Objectives and Methods

The primary objective of the study was to identify enablers and barriers to operational efficiency and synergy for integrated delivery of MDA campaigns for LF and STH. The secondary objective was to enumerate the learnings of the Pulse Polio campaign that could be utilized to improve the integrated campaign. A third objective was developed at the outset of the study: the need to create a uniform definition of the term ‘integration’ in the

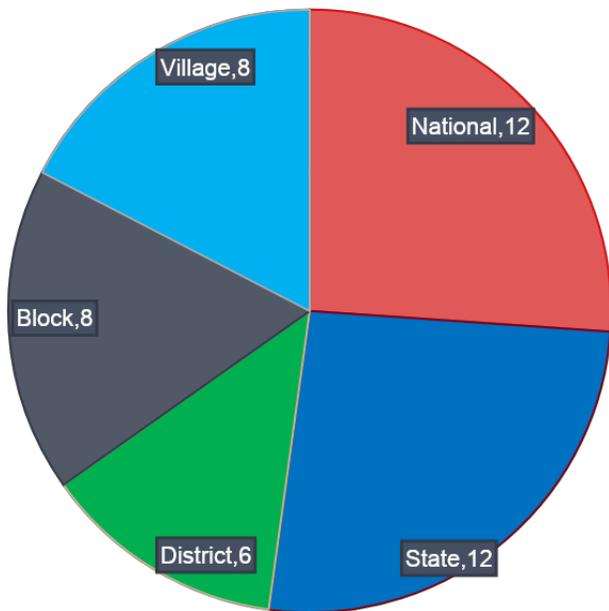
context of campaign integration that would be acceptable to all stakeholders. It was observed that government, partners, and stakeholders lacked a common understanding of the term integration. Therefore, a uniform definition of campaign integration was developed based on participant feedback.

This was the first time a study related to campaign integration has taken place in India. The Government of Uttar Pradesh supported the study as a result of the implementation of an integrated surveillance campaign (called DASTAK), which has been conducted in the state for the last four years; following this success, the government decided to expand the integration process into other campaigns including LF and STH.

The study team first undertook a desk review of relevant guidelines. Next, key informant interviews (KII) were conducted at various levels, i.e., national, state, district, block and village level. Informants included government officials, state program officers, district program officers, block medical officers, field level workers, partners, and other stakeholders. The below chart displays the number of interviews undertaken at different levels. The sampling method of participants was purposive: program experts with at least three years of experience in LF MDA, STH MDA, or the Pulse Polio campaign were interviewed. Interviews used a semi-structured interview tool which was developed by the study team and piloted and validated in the field.

Institutional review board (IRB) approvals for this study were obtained from two institutions: WCG IRB (the international IRB) and the institutional review board of Sigma (the local IRB based in Delhi).

Chart 1. Proportion of 46 interviews conducted at various levels.



Results

The first study objective was to understand possible barriers and enablers for campaign integration, identified by personnel involved at all levels, in order to obtain a holistic view.

The following heatmap illustrates the thematic areas and corresponding issues raised by participants; the darker shades represent more interviewees talking about the issue. This reflects the variation in priorities and perception of barriers and enablers across the national, state, district, block, and village levels.

Chart 2. Heatmap of topics enumerated by the participants. A darker shade corresponds to a larger number of participants talking about that topic, which illustrates the difference in priorities across levels.

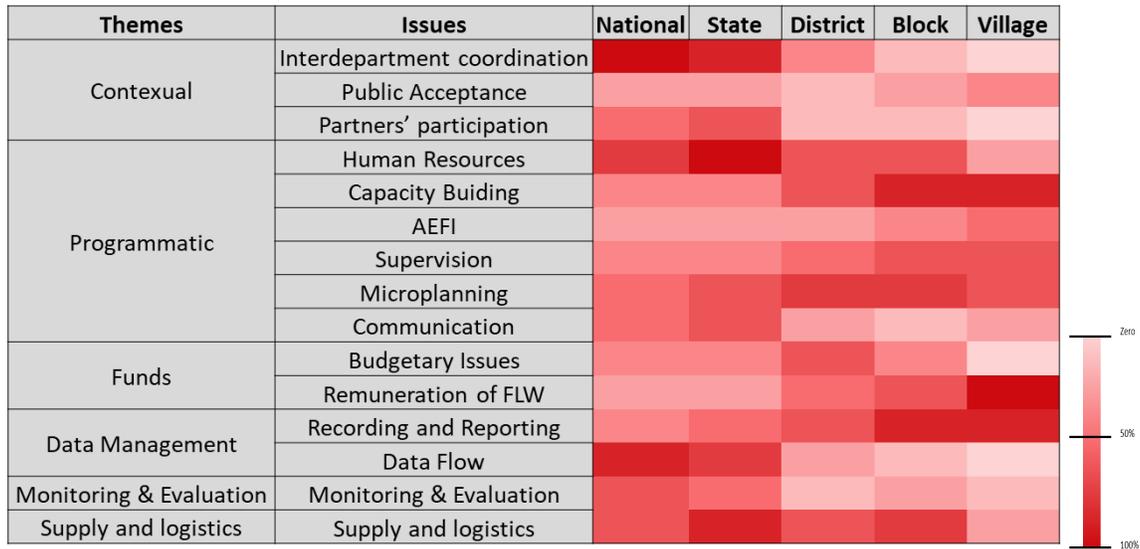
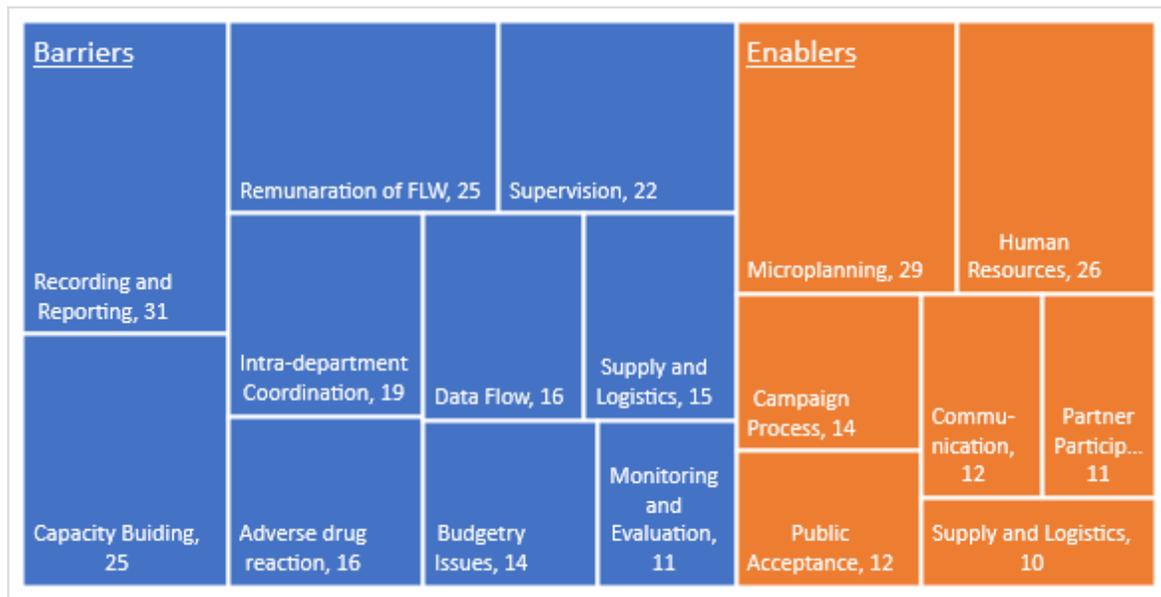


Chart 3. Presentation of barriers and enablers and number of interviews that addressed them.



Perception of certain factors as enablers vs. barriers varied somewhat across national, state, regional, and community levels. However, there was consensus in many areas.

Participants identified the following **enablers of campaign integration**:

1. Microplanning was universally identified as the biggest enabler. LF and STH campaign microplans have been prepared and adapted from the Pulse Polio campaign, and are very similar in process and detail. A microplan is created for every field team, outlining the number of houses to be visited, route maps, and names of drug administrators and supervisors.
2. Human resources were also considered as enablers, as the FLWs (ASHA, AWW) used to implement the campaigns are already identified and their geographical areas are well defined. Furthermore, these FLWs work in the same geographic areas and with the same populations in both campaigns.
3. The maturity of campaigns was pointed out to be an enabler, as MDA for LF and STH have occurred for the past 15 and 6 years, respectively. Therefore, the processes—including planning, implementation and post implementation activities—are well known to the personnel involved in these campaigns.
4. Many interviewees advocated for this integration as they felt that public acceptance will be an important factor. There was a perception among the participants that the public would accept the integrated campaign because it would help in decreasing the number of visits to the household and create efficiency.
5. Many participants identified partners' participation and in advocacy, capacity building, monitoring and evaluation as an enabler and a catalyst for integration.
6. Communication was identified as a significant enabler; a good communications strategy can be the biggest asset in enhancing public acceptance of any campaign. Study participants mentioned that the communication strategy should include both diseases, and one platform should be adopted to communicate about both campaigns. According to many participants, current information, education, and communication (IEC) and behavior change communication (BCC) activities need to be amplified to reach more beneficiaries.

Participants described the following **barriers to integration**. There was consensus that they can be overcome with the right level of planning.

1. The most significant barrier, according to many national and state officials, was that ownership of the campaigns lay with two different departments, working as vertical programs. MDA for LF falls under the National Vector Borne Disease Control Program (NVBDCP), whereas STH MDA is implemented by the Child Health Division of the Ministry of Health and Family Welfare (MoHFW). There is negligible interdepartmental coordination among them.
2. Another challenge is how data management would be handled in the integrated campaign. Many voiced their concerns over reporting and recording of the data in the field, as different tally sheets are used by FLWs to report the coverage for both the campaigns. There were also concerns about data flow to the state and national levels, as ownership of the STH and LF programs is different.
3. Capacity building of staff, including supervisors, was also identified as a barrier. In the LF MDA, focus is more towards house-to-house based activity though the schools are also covered. The STH MDA campaign is more school-based--children who did not receive the drug in school or who are not

attending school are covered through the house-to-house activity. Different training modules are used for the campaigns.

4. Budgetary issues and remuneration of FLW present a challenge. According to the respondents, limited budget was available at the state, district, and village levels to carry out many essential planning activities (trainings, reviews, IEC, social mobilization, etc.) If the campaigns were to be integrated, budget increases would be required to support these efforts. Similarly, according to many FLW and district officials, an increase in the workload of the FLWs without an increase in remuneration could hinder the success of an integrated campaign.
5. Another important barrier brought forward was the management of adverse drug reactions (ADRs). The most common ADRs found in the field tend to be very mild (e.g., fever, nausea, and vomiting). Still, according to many interviewees, ADRs are the most significant reason for drug refusal amongst the community, and is mainly seen during the LF campaign. Poor management and response to any ADR during the integrated campaign has the potential to create a major obstacle to campaign success in the area.
6. Supervision of field activities was generally regarded as the weakest link of the campaigns. Auxiliary nurse midwives (ANMs), who already have their routine work, also supervise the drug administration teams. This competing workload leads to the inability of ANMs to efficiently carry out their supervisory activities, resulting in poor quality of the campaign.

Monitoring and evaluation, though not described as a barrier per se, was also mentioned several times by participants. In the opinion of many interviewees, a strong M&E plan would be necessary for a quality campaign. The government also needs to provide budgetary and HR support for M&E activities, as currently this is only being provided by non-government partners. Government also needs to appoint staff from other departments for monitoring of field activities.

Lastly, supply and logistics was identified by some as a barrier, and by other participants as an enabler. At the national and state level, participants thought it was a barrier because the procurement of the various drugs is done by different departments. At the block and field level, it was considered an enabler due to the availability of all the drugs and similar logistics required by FLWs to distribute them. Regardless, there needs to be harmony between the procurement and distribution processes for both programs, especially with respect to timing of procurement and sending the drugs to the state and block levels.

Another objective of the study was to understand and align the definition of integration amongst the stakeholders. The majority of participants had their own definitions, which were generally part of the whole picture. Most of the participants were of the opinion that integration meant teams of both the campaigns fully working together on all aspects of planning and implementation. Some said that planning for each campaign together was considered integration, whereas others said that giving drugs for both the diseases would be considered integration of the campaigns.

At the end of the study, the following uniform definition was formulated based on the opinions shared by the participants.

“Integration is [a] process of combining components for a specific program, designed to address a specific disease or health need, with another health program; and support in maintaining ongoing interventions in a synchronized and harmonious way. This also includes [bringing] cross-cutting opportunities from both campaigns to make the [integrated] campaign efficient and effective.”

Challenges and Mitigation During the Case Study

The study was challenged by the COVID-19 pandemic, which made face-to-face interviewing difficult. As a result, most interviews were conducted virtually. In-person interviews were done with advanced coordination to ensure a standardized, fair, and safe environment for interviewees; safety precautions such as masking, sanitizing, and physical distancing also required advanced planning.

Furthermore, priorities of participants were shifted by the pandemic, with COVID-19 vaccination taking precedence over integration. Regular communication and coordination was a mitigating factor.

Promising Practices

The study team identified the following promising practices that should be consistently applied to collaborative approaches to campaign integration:

- **Develop microplans for the integrated campaign that are similar in process and detail to microplans that have been used successfully for standalone campaigns.** Planners should ensure that the process of microplanning is implemented for all campaigns, and an amalgamation of microplans developed for an integrated campaign.
- **Identify campaigns to be integrated that campaign workers know well,** in terms of processes for planning, implementation and post-implementation.
- **Develop and implement a communication strategy** that addresses both diseases/interventions, uses one platform to communicate about the integrated campaign, and amplifies information, education and communication (IEC) and behavior change communication (BCC) to reach more beneficiaries.
- **Develop an integrated training module for the integrated campaign** that can be delivered during one single or multi-day training session to reduce the number of sessions required for each worker.
- **Develop a single monitoring tool for the integrated campaign** that harmonizes key aspects of the monitoring tools used in the standalone campaigns, and train personnel in its use.
- **Embrace the practices and learnings from prior, highly successful campaigns.** In India, the Pulse Polio campaign has been the biggest and most successful campaign of its time. The learnings of the Pulse Polio campaign have already been adopted into many other successful campaigns in the country, such as those for measles and Japanese encephalitis. An integrated campaign for lymphatic filariasis and soil transmitted helminthiasis will have more impact if it embraces the learnings from Pulse Polio.
- **Digitize the beneficiary list.** Although this can initially be a time-consuming task, it will lessen the future workload of field workers.
- **Compare and merge family/household/population registers during the microplanning process.** In this case study, family registers from the lymphatic filariasis (LF) campaign were compared with school

attendance lists from and soil transmitted helminthiasis (STH) campaigns so that students who were absent from school during the STH campaign could receive the STH intervention during the LF campaign home visit.

Lessons Learned

The following lessons learned were developed as a result of unexpected findings and/or challenges encountered during this study.

- **Learnings from a successfully executed campaign, such as the Pulse Polio immunization program, can improve the quality of an integrated campaign.** The integrated campaign should replicate the activities of the successful campaign, such as creating review mechanisms at all levels, conducting daily briefings with supervisors, field workers, and officials, using interactive methods for capacity building, strengthening monitoring and evaluation, and involving relevant stakeholders for advocacy.
- **Having prior experience with successful integration activities can help pave the way for campaign integration.** The Government of Uttar Pradesh supported the study as a result of the implementation of an integrated surveillance campaign (called DASTAK), which has been conducted in the state for the last four years; following this success, the government decided to expand the integration process into other campaigns including LF and STH.
- **A single strategy may not be applicable for integration in all geographical regions, or with all types of campaigns.** For example, during this study it became evident that different strategies would be required in rural and urban settings. A universal strategy can be a guide for integration, but it needs to be customized according to different campaigns and according to different geographical regions.
- **It is imperative to understand the views of all stakeholders.** The barriers and enablers of field workers were not always congruent with national and state workers in this study. The views of community members should also be incorporated into future studies. Planners should gain a holistic view of priorities at all levels to ensure campaign success since only then will barriers at each level be understood and overcome.
- **It is critical to have synergy and coordination between the vertical programs** that manage individual campaigns to ensure good planning and execution of integrated campaigns. Intradepartmental convergence at the top level could lead to streamlined planning and coordinated implementation of the integrated campaign to achieve the best results.
- Data management varies for each standalone campaign. Therefore, **integrated campaigns must develop effective data management strategies** that meet the needs of the integrated campaign.
- **Budgetary issues and remuneration of health workers present a challenge and must be addressed during the pre-planning and planning process.** An increase in the workload of the FLWs without an increase in remuneration could hinder the success of an integrated campaign.
- **Concerns about adverse drug reactions must be identified, acknowledged, and addressed** because these are one of the most common reasons for drug refusal amongst the community.
- Supervision of field activities is often regarded as the weakest link of campaigns. Care must be taken to **ensure that supervision of field activities in an integrated campaign is adequate without overworking field workers.**

- **Supply chain and logistics processes should be harmonized** for both programs, especially with respect to timing of procurement and sending commodities to the state and block levels.

Conclusion and Recommendations

MDA for LF and STH are promising choices for integration due to their many commonalities, including shared use of albendazole and overlapping target populations. Strong political will is essential to support an integrated LF and STH campaign. In India, coordination of planning, implementation, and post-implementation activities between the two departments that own the LF and STH campaigns, respectively (NCDCP and Child Health Division of the MoHFW), is required for successful integration; inter- and intra-departmental coordination is essential for success in any country context. Planners should utilize the learnings of successful campaigns, such as Pulse Polio, in the design and implementation of an integrated campaign. Finally, the strategy devised for the integration of LF and STH campaigns may need to be tailored differently according to the specific health interventions, geographies, and target beneficiaries.

The following recommendations were developed as a result of this case study. They can be applied and customized both in the context of India's integrated campaign planning, and in integrated campaigns in other countries.

1. It is imperative for policy makers, program officers, partners, and other stakeholders to get involved at an early stage in planning, implementation, and post-implementation activities. Alignment and convergence across stakeholders is essential for a successful campaign.
2. A successful campaign requires strong political will and commitment, including concerted advocacy at the global level as well the national level, and the participation of key partners in advocacy. Once political will is established, it could have a trickle-down effect that may lead to strong ownership of the campaign at all levels. Thus, the importance of early dialogue and advocacy with policy makers cannot be overstated.
3. Campaigns must prioritize health equity and timely delivery of services to all beneficiaries. It is imperative that interventions reach all members of the targeted community, which may necessitate adapting strategies on the ground to improve acceptability and increase access for vulnerable and hard-to-reach groups.
4. A strong communications plan is essential, and should convey the importance of the interventions and address community concerns in a simple, honest manner.
5. An integrated campaign should utilize a timely monitoring process that supports data-driven adjustments to current campaign activities. Feedback should be shared with relevant program officials during the campaign so that problems can be resolved and improvements made throughout the implementation. A strong M&E process should also generate robust evaluation data to help improve future campaigns.
6. Human resources and funding can be combined to support planning and implementation processes for an integrated campaign, thereby optimizing resources and bolstering processes.
7. Piloting the integrated campaign in one district, and utilizing the learnings from that campaign to scale up, will help in generating sufficient evidence and learnings to inform a broader integrated campaign.

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For more information on this topic or to discuss further with the Health Campaign Effectiveness team, please visit www.campaigneffectiveness.org or contact the program directly at: campaigneffectiveness@taskforce.org

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