Preferred Practices for Zithromax® Mass Drug Administration

ICTC International Coalition for Trachoma Control

Glossary

CDD	Community directed distributors
CDI	Community directed intervention
GET 2020	Alliance for the Global Elimination of Trachoma by 2020
ICTC	International Coalition for Trachoma Control
ITI	International Trachoma Initiative
KCCO	Kilimanjaro Centre for Community Ophthalmology
MDA	Mass drug administration
MoH	Ministry of Health
NGO	Non-governmental organization
NTD	Neglected tropical diseases
NTTF	National Trachoma Task Force
SAFE	SAFE (surgery, antibiotics, facial cleanliness, environmental improvements)
TAP	Trachoma Action Plan
TF	Trachoma follicles
TI	Trachoma intense
TT	Trachomatous trichiasis
WHO	World Health Organization

September 2013

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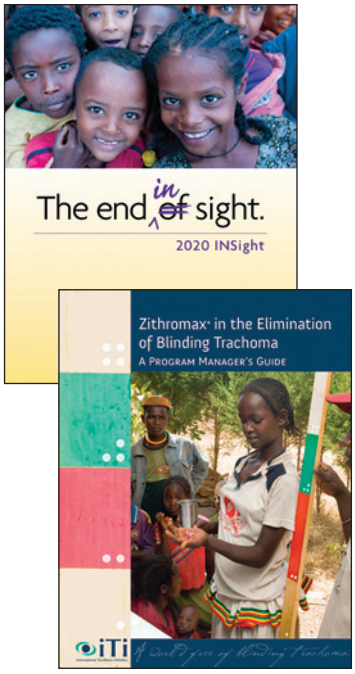
International Coalition
for Trachoma Control

Foreword

Countries, partners, and donors are committed to the global elimination of blinding trachoma by 2020. Achieving this public health milestone requires more than funding; it requires health personnel with the right mix of skills, and well supported and managed health systems. Mass drug administration (MDA) with Zithromax®, the Pfizer, Inc. donated antibiotic, is a key component of the SAFE strategy, endorsed by the World Health Organization. There is growing recognition that improving all aspects of MDA, from planning to training, recording to reporting, and receipt of drug to distribution (the supply chain), will be necessary if MDA programmes are going to reduce the community burden of *Chlamydia trachomatis*, and eliminate trachoma as a cause of blindness by 2020.

The goal of this "toolbox" is to share experiences and provide country managers, regional coordinators, and others with preferred practices for trachoma MDA. Issues addressed in this document cover a range of topics from national coordination to local implementation. Thus, the content will be useful to a broad range of readers. While this document focuses on African-based trachoma programmes, we believe the preferred practices will not only benefit national trachoma programmes globally, but they may be relevant to other neglected tropical diseases (NTDs) that include an MDA component.

This document is NOT prescriptive. Context varies by country and in large countries there are likely to be differences noted across regions that influence how MDA is planned, implemented, and reported. Of particular importance is the variation in health systems; some settings have centralized health systems (with key decisions being made centrally and implemented nationally), while others are decentralized (with more decisions to be made at the regional or district level). Thus, we hope you will adapt these tools to your environment.



There is already a considerable amount of information available to assist you with planning, training, and implementing. Throughout this document, we will refer to these existing materials and where they can be found.

Finally, it is important to recognize that the effective and efficient approaches for trachoma MDA are NOT rigid; we anticipate that innovations will arise in the coming months and years. Thus, this "toolbox" is likely to be revised periodically. We ask you to help facilitate the process by letting us know about your ideas and experiences. Please contact Dr. Paul Courtright at PCourtright@kcco.net

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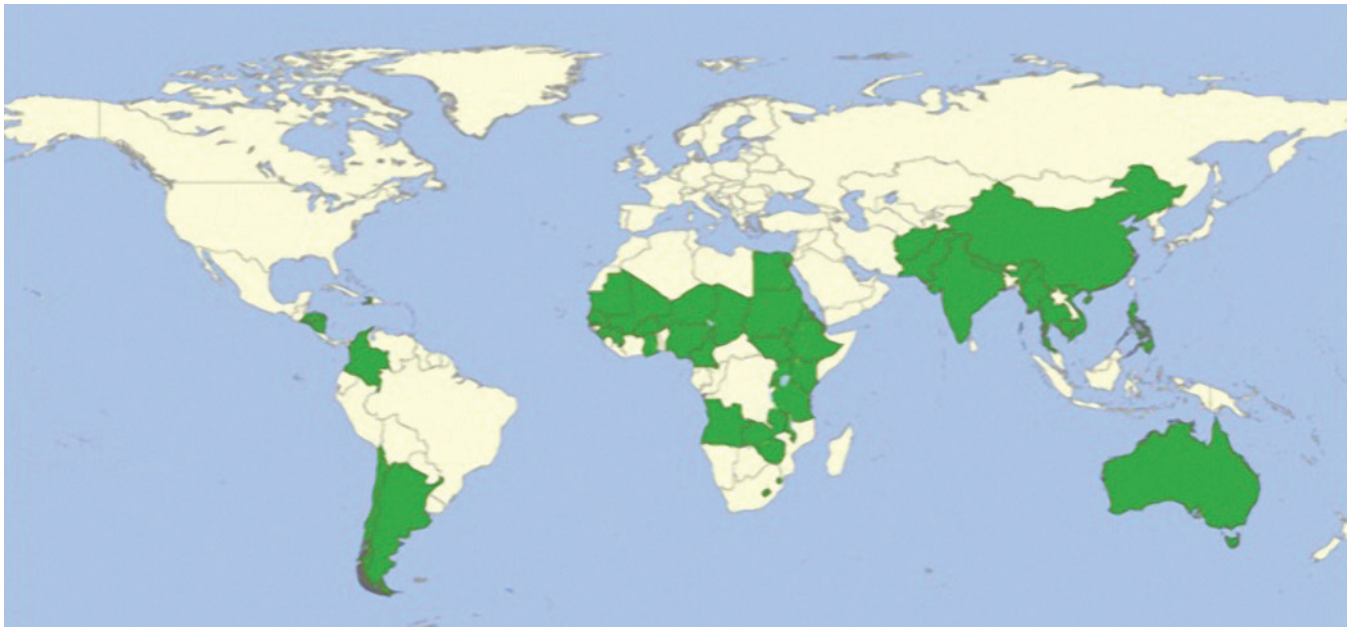


ICTC SAFE Support (as of 2011)

1. Background

1.1 Trachoma and its management

Trachoma is the leading cause of infectious vision loss in the world and the eighth most common cause of blindness. It mainly affects people living in the poorest and most marginalized areas of the world. Estimates suggest that at least 110 million people live in trachoma endemic areas and about 4.6 million people have trichiasis, the potentially blinding complication of infection. In addition, another 210 million people live in areas suspected for trachoma; in those areas an additional 3.6 million people are likely to have trichiasis. Mapping of trachoma, currently underway in many parts of the world, will likely set the stage for trachoma intervention on a massive scale over the coming years.

The path to blinding trachoma starts with infection in the eye with *C. trachomatis*. The disease presents in young children as a chronic inflammation of the eyelid. Where trachoma is endemic, starting from a very young age, children get repeated infections. Repeated infections can lead to scarring of the eyelid, which leads to entropion, the in-turning of the eyelid, and trachomatous trichiasis (TT), the contact between the lash and the eyeball; a very painful condition.

Trachomatous inflammation-follicular (referred to as TF) is defined as "the presence of five or more follicles at least 0.5 mm in diameter in the central part of the upper tarsal conjunctiva" and are indicative of active disease. Trachomatous inflammation-intense (TI) is defined as "pronounced inflammatory thickening of the upper tarsal conjunctiva obscuring more than half the normal deep tarsal vessels." Photos taken from the World Health Organization standardized grading system for trachoma.

Trachomatous inflammation – follicular (TF).

Trachomatous inflammation – follicular and intense (TF + TI).

Repeated corneal trauma due to trichiasis can cause severe pain and lead to corneal opacification (CO) and blindness.

Although, children get infected at an early age, vision loss due to trachoma typically does not occur until adulthood. Women are almost twice as likely as men to develop TT from trachoma. While estimates vary, it is likely that 2.2 million people worldwide have low

Surgery

for inturned eyelids

Antibiotics

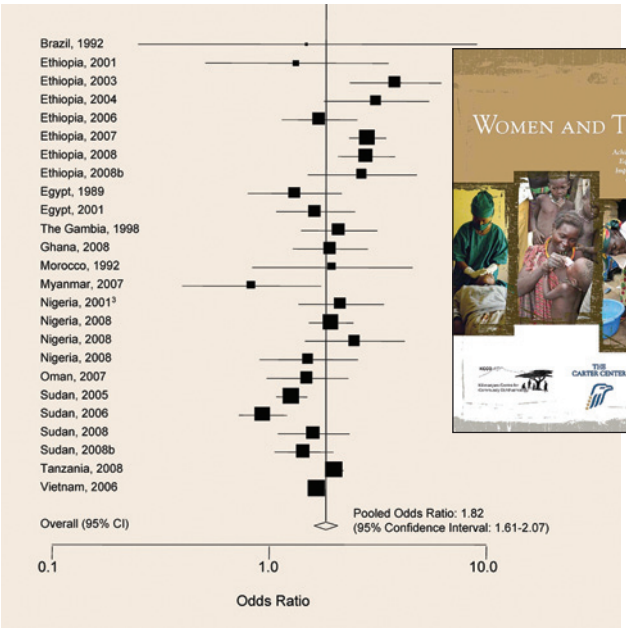
Pfizer-donated Zithromax® to treat and prevent active infection

Facial cleanliness

to prevent disease transmission

Environmental change

to increase access to water and sanitation



Forest plot of odds ratios. A meta-analysis of available prevalence survey data was performed to determine the overall summary odds of trichiasis in women compared to men. The vertical line shows the overall odds ratio. Individual survey odds ratios are weighted by the size of the sample. Graph and image courtesy of The Carter Center.

vision, of whom 1.2 million are irreversibly blind as a result of trachoma.

In 1998 the Alliance for the Global Elimination of Blinding Trachoma by 2020 (GET 2020) was formed to guide and support the implementation of the SAFE strategy, shown to be effective in eliminating blinding trachoma. There is a growing body of information on preferred practices for the components of the SAFE strategy, which are Surgery, Antibiotics, Facial cleanliness and Environmental change.

Trachoma is included as one of the priority conditions of the VISION 2020 "Right to Sight" initiative adopted by the World Health Organization and the International Agency for the Prevention of Blindness. A number of World Health Assembly resolutions have incorporated the elimination of blindness from trachoma as a priority. More recently, WHO and some national governments have shifted aspects of trachoma control into the Neglected Tropical Disease list because the mass drug administration (MDA) strategy for trachoma is similar to MDA strategies for other NTDs.

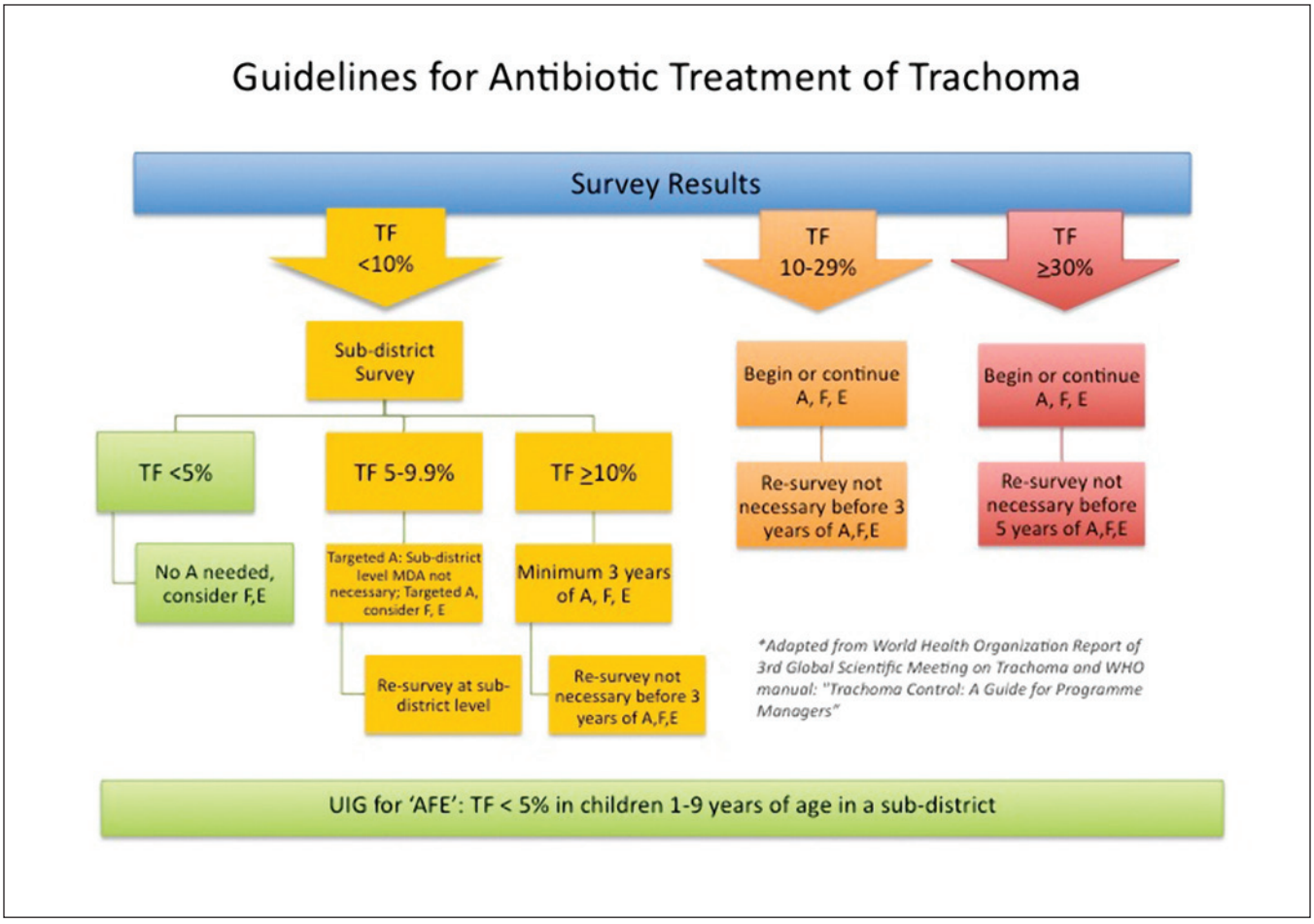
1.2 Mass drug administration

WHO currently recommends two antibiotics to control trachoma: 1% tetracycline eye ointment and azithromycin. Tetracycline eye ointment can clear ocular *C. trachomatis* infection if administered to both eyes twice daily for six weeks and is almost universally available. It is, however, difficult and unpleasant to apply, so compliance is often poor. Azithromycin clears ocular *C. trachomatis* infection with one oral dose (20 mg/kg body weight) and is well tolerated by both children and adults. Zithromax® (the Pfizer-donated azithromycin) treats infection and reduces transmission in the community by treating the pool of infection.

The goal of MDA for trachoma, which is somewhat different from other NTD MDA programmes, is to treat the entire population. Recent studies have shown that coverage should not be less than 90% coverage. Epidemiological coverage is defined as the number of people treated (with either Zithromax® or tetracycline eye ointment) divided by the total number of residents. Children under 6 months are not eligible to receive Zithromax®. The decision whether to treat pregnant women or not remains with the national programme. For more information about eligibility, please refer to the ITI Program Manager's guide. The International Trachoma Initiative (ITI) will provide enough antibiotic for a country programme to achieve a 100% coverage rate of the eligible population, but an acceptable coverage rate would likely fall between 90-95% of the eligible population.

There are WHO guidelines for starting and stopping antibiotic distribution. Based upon the findings from trachoma mapping, programmes (whether centralized national programmes or decentralized district programmes) need to commit to supporting MDA for a period of three to five years. Stopping midway or failing to achieve a high coverage during every annual MDA cycle threatens the success of the overall programme which will mean that reaching the elimination goal is delayed.

There are different treatment approaches to trachoma MDA, and there is research underway on co-administration of Zithromax® and other NTD drugs. Historically, MDA for trachoma was a vertical programme. The common overlap and similarities in treatment strategies with many NTD programmes has led to "integrating" programme components in an effort to save money, accelerate scale up, and improve coverage rates. Training of community distributors and their supervisors in managing the various drug packages is an example of this integration as is social mobilization. An example of "integrated" programmes outside of NTDs is the combination of trachoma and malaria activities in Ethiopia; during MalTra, Zithromax® is distributed simultaneously with fever screening, followed by malaria testing and



treatment as appropriate, health education, and other activities during a weeklong campaign. For trachoma, while there are important benefits to integrating with other NTD and health programmes, it is important that all aspects of the SAFE strategy (beyond the "A" component) are being addressed in each endemic area. This, in fact, is a requirement of the Pfizer donation programme.

The scale up of SAFE activities requires a systems-based approach starting with disease mapping, national trachoma elimination planning (referred to as Trachoma Action Plans or TAPs), intervention, monitoring, and assessment of elimination. Improved efficiency and effectiveness of trachoma MDA is critical to the global, national, and district success in elimination of blinding trachoma.

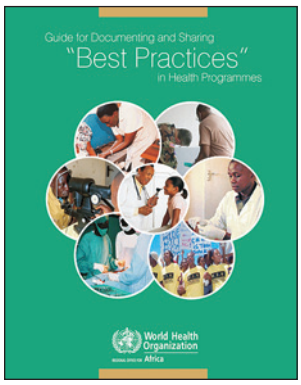
2. Preferred practice guidelines

The Trachoma MDA Toolbox uses the "preferred practice guidelines" approach to generating information necessary to inform programmes about MDA for trachoma. There is considerable information in the ITI Program Manager's Guide that served as a foundation for the current work. We asked existing programmes how they approach specific issues identified in the field.

A preferred practice (sometimes called a "best practice") is commonly defined as "a technique or methodology that, through experience and research, has proven reliable to lead to a desired result." In the field of trachoma control, it could be further defined as "knowledge about what works in specific situations and contexts to achieve high coverage of MDA". Furthermore, the knowledge can be used to develop and implement MDA for trachoma adapted to other situations or contexts.

Documenting and applying lessons learned on what works, what does not work, and why it does not work is an integral part of understanding preferred practices for trachoma MDA. Thus, the Trachoma MDA Toolbox includes what we learned from the field. Fieldwork is described in the next section.

WHO/AFRO (African Regional Office) has prepared procedures to identify and document preferred practices. This entails a review of the current scientific knowledge on trachoma MDA and field research. Equally important is the judgment by experts to provide balance and interpretation. There are a number of criteria used to define preferred practices. The two most important are effectiveness (the practice works, achieving results that are measurable) and efficiency (the practice produces results with a reasonable level of resources and time).



WHO "best practice" criteria:
- Effectiveness
- Efficiency
- Relevance
- Ethical soundness
- Sustainability
- Possibility of duplication
- Involvement of partnerships
- Community involvement
- Political commitment

2.1 MDA for trachoma project

With support from the International Trachoma Initiative (ITI), the Kilimanjaro Centre for Community Ophthalmology (KCCO) was the lead partner in carrying out the project that led to the development of the Trachoma MDA Toolbox. An MDA working group provided guidance throughout the project period.

The first step was to do a literature review of mass drug administration, without focusing on any specific NTD or other condition. The literature review revealed considerable lessons learned from the community-based distributor model employed by the onchocerciasis control efforts. There was only limited information on MDA programmes that relied on health workers or others for MDA activities. The available information helped inform the next phase of work.

National coordinators (either NTD coordinators or prevention of blindness coordinators) were contacted with a standardized form to learn more about specific strategies being employed, at the time, for MDA for trachoma. At the time of data collection (2011), most trachoma efforts were under prevention of blindness units and were vertical in nature. Many countries were just starting MDA programmes and unable to comment on programme specifics. The survey revealed that there was considerable heterogeneity in approaches, in support, in partnership, between the countries, and even within countries. Nevertheless, there was a general desire by the countries to have more information on how to ensure that their MDA programmes are effective and efficient.

A series of on-the-ground case studies were done in a number of countries to document "what worked, what did not work, and why." The case studies followed a format that originated from the first two steps and discussion with the working group. While these case studies detailed many context-specific practices, the overall goal was to identify which practices are likely relevant to all programmes—we refer to these as "higher level practices." This is not to deny the value of the specific practices applied country by country and even district by district, based upon the lessons learned over years of programme work but rather to provide those planning and implementing MDA with some potential approaches to improved MDA. The case studies led to the development of a list of preferred practices that was then reviewed by a group of experts who gathered at KCCO International in Cape Town, South Africa in October 2012. The consultation (and follow-up meetings with a smaller group of writers) led to refinements of the preferred practices, which are presented in this Trachoma MDA Toolbox.

The process of reflection and refinement will continue as new technologies are developed, as new approaches are undertaken, and as new lessons learned are documented. Thus, this should be viewed as a "living document."

2.2 Preferred practice guidelines for Trachoma MDA

Preferred practice guidelines for trachoma MDA reflect the current situation of MDA. Programmes mature, situations change, and lessons are learned. Thus, the preferred practices in the following sections of this document should not be considered as rigid. It is anticipated that preferred practices will be revised as MDA programmes mature.

These preferred practices address issues that national trachoma control efforts need to consider. The issues and problems that national programmes face, whether at the national level, at the district level, or at the field level, form the basis of each of the preferred practices included. This toolbox focuses on preferred practices that are likely common in all settings. Though developed for trachoma, it is likely that many of the tools in this document will be applicable to other MDA programmes for NTDs.

The format for preferred practices in this toolbox is as follows:

- The table of preferred practices (listed in the Table of Contents on pages 2–3) is presented by topic areas. Under each topic area, there are short headings with issues listed for each. This is to help the reader quickly locate specific issues.
- For each of these headings, the writing team has documented preferred practices that have been used successfully in MDA programmes.
- Text boxes and sidebars are used for the following purposes:
  - To direct the reader to other material on the subject
  - To provide a case study
  - To list some key points
- If relevant information is in another document, it will not be repeated here; instead, we will direct you to the document and relevant pages.

3. National coordination

3.1 National Trachoma Action Plan

Issue: "A man who does not plan ahead will find trouble at his door" (Confucius) or "By failing to prepare you are preparing to fail" (Benjamin Franklin). Simply put, every trachoma endemic country requires a well thought-out, practical plan whose goal is to eliminate blinding trachoma

Developing the national Trachoma Action Plan (TAP) is a critical step toward establishing a well-coordinated and effective programme. A TAP is an excellent platform for deciding on common goals and strategies; in the planning session everyone shares the same vision and articulates the same mission and goal. The TAP is a roadmap that shows the pathway and the milestones to achieving the goal of trachoma elimination by 2020.

Evidence-informed planning must be applied when developing a TAP. Based on historical data and local knowledge, the TAP may indicate a need to do mapping in parts of the country. Mapping is a fundamental guide for planning and setting priorities for a national trachoma programme.

> "The Kenya TAP planning session, which we held in 2011, was instrumental in helping Kenya have in-place a well designed implementation plan. Since then broad based government agreement and support, strengthen NGO collaboration, and donor support for the Kenya elimination plan means that Kenya is on track to achieve its trachoma elimination goals."
>
> – Dr. Michael Gichangi,
> National Eye Coordinator, Kenya

The TAP is an integral part of the NTD master plan. When developing the TAP, complete data might not be available. Programmes can start working on a TAP with available information and then develop it further as more and more data becomes available.

The TAP is also a practical instrument for resource mapping. It shows clearly which trachoma partners are doing what and where. The TAP also contains a budget required to the effectively implement the SAFE strategy. Finally, the TAP can be an effective advocacy tool. The executive summary helps non-health professionals (e.g., political leaders and policy makers) understand the situation.

The TAP is a written plan to eliminate trachoma. The TAP provides the vision to elimination, enables advocacy, and facilitates stakeholder coordination. GET 2020 provides tools to assist with writing a TAP, including a TAP Users Manuel PowerPoint presentation, TAP Template word document and TAP Data Tool excel file. The sections the TAP include:

1. An executive summary
2. Introduction: description of disease burden, trachoma pathology and progression, trachoma control activities, progress toward elimination, and use of the TAP
3. Current state of trachoma in the country: number of districts with confirmed trachoma, summary of interventions, stakeholder support, success of SAFE interventions, and challenges
4. The path to elimination: quantifying scale-up, timelines to scale-up, costs of interventions and scale-up, key success factors, stakeholder engagement strategy, early milestones, and integration with masterplan for NTD control.
5. Case for action
6. Appendices

The TAP Data Tool provides tools that assist with writing the TAP. The Data Tool is a comprehensive spreadsheet with tabs that cover all major topics above and tables with pre-populated formulas to assist with any calculations.

3.2 National level coordination

Issue: Trachoma is not just a health problem; it is a development problem. Without good coordination, much effort can be wasted

The SAFE strategy needs a multi-sectoral approach. For the national trachoma programme to function effectively, there needs to be a well-functioning National Trachoma Task Force (NTTF) involving governmental and non-governmental members from such sectors as water, hygiene and sanitation, education, agriculture, information (mass media), health, and administration. Depending on the local situation and NTD burden, the NTTF should collaborate closely with the NTD programme. The NTTF needs clearly written terms of reference (TOR) with defined roles and responsibilities. The NTTF should be mandated to make policy and provide programmatic guidelines and direction to implementing partners; the NTTF is not involved in implementation.

The National Trachoma Taskforce is responsible for coordination and integration of trachoma plans, activities, operational research, sharing information with stakeholders and ensuring political support at the highest level. National task force members include:

- Governmental representatives
- Non-governmental organizations
- Donors
- Academic institutions

Successful task forces invest in capacity building in the areas of leadership, partnership, management and political ownership.

http://www.cehjournal.org/0953-6833/23/jceh_23_73_038.1.htm

3.3 Campaigns

Issue: Maintaining engagement of political and administrative leaders throughout the year is virtually impossible: adopting a campaign approach may be the most helpful

Effective implementation of the SAFE strategy requires diligent planning and timely action involving all development sectors operating in the programme area. Although regular programme operations are necessary for the face washing and environmental change components of the SAFE strategy, campaign approaches are most viable for tackling multi-year MDA plans. You may want to engage local officials to attend an official launch of the annual MDA campaign. Consider inviting prominent national and international dignitaries to attend MDA launch events. In general, it's good to engage the highest levels of political support for an MDA campaign, and invite them to attend launch events. Educating and mobilizing the communities requires meticulous planning. These efforts should be intensified in the weeks before the campaign, and involve all levels of the political and administrative structure.

3.4 Frequent personnel turnover

Issue: There is frequent staff turnover at all levels of the health care structure and in political leadership positions, which makes it difficult to maintain understanding and engagement related to trachoma control

Garnering political support requires relentless effort and continuous investment of time and money. Advocacy and capacity building efforts must be done every year because new people assume positions related to NTDs and eye care. To make advocacy and mobilization more effective and efficient, create a specific budget line for it as part of the overall recurrent MDA cost. It is essential to involve the media in the sensitization and advocacy work before, during, and after the mass campaigns as this will also help reach new political and administrative leaders.

3.5 Proactive supportive leadership

Issue: Proactive, supportive leadership is a critical factor in MDA success

Assigning competent and highly motivated leaders and programme coordinators at national and regional levels is the first crucial step in establishing an effective national trachoma programme. Coordinators should have all the attributes of good leaders: they should be proactive, supportive, and innovative. Trachoma coordinators (individual responsible for trachoma coordination in the MoH, often in either the NTD or prevention of blindness unit) must be very passionate and effective communicators. They should be able to articulate their vision effectively and have the courage to impart it to co-workers. Most of all, they should lead by example, being persons of integrity, discipline, and ethics. Assertiveness, magnanimity, humility, and transparency are among some of the most notable personality characteristics required of a well qualified programme coordinator. Failure should not be not an option for such programme leaders.

Attributes of a good leader

- Motivated
- Proactive
- Supportive
- Energetic
- Effective communicator
- Passionate
- Assertive
- Magnanimous
- Humble
- Honest

Starting small, acting now, and thinking big are ways to start a large-scale model programme. Passionate leaders are never satisfied until the goal is achieved (in our case elimination of blinding trachoma). Scale-up and programme expansion requires leaders to delegate coordination and leadership to regional/district personnel. Good leadership entails maintaining advocacy at the local government levels in order to ensure that district health management and the respective political and administration circles are owners and managers of the SAFE strategy in general and the MDA operations in particular. This means that district administrators and their counterparts are responsible for the planning, implementation, monitoring and evaluation of the programme and communicating with the field teams from every village during MDA campaigns.

3.6 District strengthening

Issue: Inefficient MDA implementation at the district level threatens programme success

National programmes should identify a district level focal person who can acquire, absorb, and use the information needed for long-range planning at the district level. These key people then need to be engaged and involved with identifying and implementing programme goals and activities, and should supervise and track local progress.

Establishing and maintaining communication and feedback mechanisms should be an early priority; it is not uncommon to see innovative approaches and creative methods originate in the field. It is important to be able to identify these innovations and test them elsewhere. Due recognition should be given to the "innovators" and appropriate actions need to be taken to apply or replicate those innovations. The grass-roots innovators should get the opportunity to share their experience in debriefing sessions or review meetings with those at higher administrative levels who are responsible for developing the training and action plans for the following year. Documenting and disseminating such practices is a good way to enrich programmes.

It is helpful to identify a national level resource person responsible for updating district focal persons and others for orientation, a common need given high staff turnover in many settings. Ongoing capacity building needs to be planned for, implemented, and evaluated.

"It is not uncommon to see innovative approaches and creative methods originating from the field."

National programmes should identify the level at which micro-planning activities should be coordinated. This often depends on the government structure and availability of resource persons to facilitate the micro-planning process. Implementing MDA often involves thousands of implementers and millions of beneficiaries. Using standardized MS Excel sheets (see supplemental material) facilitates efficient micro-planning (logistics and budgets). Building capacity for micro-planning should integrate international/national standards with local knowledge and practical experience.

4. Integrating Trachoma MDA with other preventive chemotherapy NTDs

Integration of MDA for trachoma with MDA for other preventive chemotherapy (PCT) neglected tropical diseases (NTDs) is still relatively new in many countries; this means that many programmes are still in the learning phase. With time it is likely that more preferred practices will emerge from across Africa.

4.1 Distribution of medicines for integrated PCT NTDs through CDDs

Issue: Distributors can get easily confused with multiple PCT NTDs and with complicated distribution schemes

There is considerable experience having CDDs as the backbone of MDA for onchocerciasis. Adding additional PCT NTD activities to CDDs has been challenging. CDDs have limited education, limited experience in health care service delivery, and have limited time to dedicate to MDA. It is likely that the number of individuals that a single CDD can effectively manage is in the range of 100 to 200.

Some of the other PCT NTDs provide treatment only to sub-groups in the population (e.g., schoolchildren) and it is possible that, within a given district with multiple distribution programmes, sub-group PCT NTDs may be managed through distributors that are not CDDs; an example being school teachers. Adopting complicated distribution schemes for trachoma MDA, for example teachers providing treatment to schoolchildren, CDDs for general community members, and health workers at health centres for POS, is likely to lead to reporting and coverage gaps. Keeping distribution systems simple may reduce some degree of integration but may be necessary to maintain adequate coverage.

The one week gap between distribution of medicines for other PCT NTDs and trachoma can cause considerable confusion as well as causing CDD burnout. Early in programme implementation it appears that conducting a separate training for trachoma MDA, just before the planned distribution, is useful in reducing or preventing the possibility of misallocation. With time and experience, integrating training may become possible. Whether training is integrated or separate it is critical that distribution start as soon as training is done. This requires having all of the drugs in place before training starts. Having all of the PCT drugs in place at the same time does not mean giving them to the CDDs at the same time; it is important for the Zithromax® and tetracycline to be provided to the CDDs separately.

A common thread that runs throughout all aspects of integrated PCT for NTDs is the strong supervision needed to ensure that CDDs adequately perform all of their roles.

Attrition of CDDs is quite high in all CDD programmes including integrated MDA. At present there is little documentation on level of attrition or on ways to reduce attrition. On the other hand, there are some approaches which can improve the quality of work of CDDs (and may reduce attrition). Communication and advocacy by the programme with village leaders are essential to gain trust, to gain support by the community, and to identify distributors most well-known and trusted. This level of engagement of village leaders is an investment. In a number of settings village leaders can be responsible for drug storage, for mobilization within the community, and for improving the accountability of CDDs to the programme.

4.2 Coordination of MDA for PCT NTDs

Issue: Coordination of multiple PCT NTDs can be challenging

Coordination of the multiple PCT NTDs can be challenging; there are different target groups, different overall strategies (including morbidity and prevention), different reporting, and often different programme histories. Where present, different disease coordinators bring different experiences and expectations to the table. A strong coordination system from the national to the regional/state to the district is required to address the challenges. If one level is ignored, coordination can be weak and supervision inadequate. Except in small countries and/or small programmes, experience has shown that going from the national level direct to the district level can lead to considerable gaps in supervision and management. The roles and responsibilities of each level, and how they are to interact should be carefully documented and monitored. At the regional/state level it is helpful to identify one overall coordinator; the team comprises all of the disease-specific NTD coordinators and planning and budgeting are done together.

Coordination mechanisms need to change with time; early in the development of integrated MDA programmes it is useful to have more supervision and stronger coordination structures; although more expensive, this enables the programme to establish a good foundation of work and experience. As time progresses and skills and experience increase, coordination efforts can start to shift downward. It is important for the programme to be aware of coordination gaps and to recognize when the programme is strong enough to shift from a centralized approach to a more decentralized approach. Not all districts and regions are equally ready and supervision may need to become more targeted.

Incentives

Incentives are essential to achieve a good quality of work by CDDs responsible for multiple MDA activities. In settings where incentives are provided by the programme, some highlights are:

- Incentives are provided only after the completion of MDA
- Incentives are linked to the submission of reports
- Incentives are linked to adequate (80% or more) coverage figures. It should be noted that supervision or follow up is needed to ensure that reported coverage figures are not fabricated.

In settings where incentives are not provided by the programme, some highlights are:

- Community leaders lead the discussion of acceptable incentives to be provided by the community
- Community leaders provide a level of supervision for the CDDs
- Community leaders provide advocacy within the community.

Coordination of MDA for PCT NTDs has evolved differently in different countries and there is no "ideal model"; sometimes the degree of coordination achieved at the national level is personality-dependent. Strengthening the management and leadership skills at national level could improve coordination. In most countries MDA for trachoma has been a more recent addition to the PCT NTD portfolio. This has been both a benefit and a challenge for trachoma. Gradually building on the existing MDA for other NTDS allows for strengthening of the system and learning. At the same time, if MDA for trachoma is forced to follow other PCT NTD MDA models, the unique nature of trachoma control can be lost and gaps can emerge. Thus, strengthening coordination at all levels is critical for success.

4.3 Unique features of trachoma MDA in PCT NTDs

Issue: Some medicines for PCT NTDs can be given at the same time; there must be a one week gap between other NTDs and Zithromax® distribution

Integration of activities is best accomplished when the activities are similar. This includes similar distribution systems, similar recording and reporting systems, and similar training programmes. While there are many similarities in MDA for the various PCT diseases, there are some differences which, if ignored, can lead to poor programme performance. One of the unique features of MDA for trachoma is the need to have a one week gap between trachoma MDA and MDA for other NTDs. In most settings it appears that MDA for the other PCT NTDs is done first followed by a one week gap before MDA for trachoma. Ensuring good coverage in this situation can be difficult: CDDs become "burnt-out" and supervision may be less strenuous. Laxity in the system can lead to unacceptably low coverage figures. Guarding against this may require some revisions to the training of CDDs; for example, CDDs often require some form of additional training or follow up after they have undertaken the first round of NTD MDA and before trachoma MDA has started. Furthermore there is likely to be a need for more intensive supervision during MDA for trachoma to guard against events such as "feeding antibiotics to the trees".

In some integrated MDA programmes, registration books are by disease while in others they are combined. If combined, the registration books may reflect the other NTDs (focused on schoolchildren, etc.) and not be as appropriate for trachoma MDA. Finding the right balance for recording, for reporting of coverage, and for drug return requires the programme to critically review reporting systems to reduce the possibility of gaps in distribution.

4.4 Drug delivery

Issue: Getting the drugs to the districts and then to the distributors around the same period can be difficult

Although supply chain management is only briefly discussed in this manual, having a well-organized supply chain is essential to successful MDA activities. There are plenty of experiences of delayed drug deliveries threatening the success of MDA programmes. A long period between training and distribution can be the result; this often leads to poor coverage. At all levels PCT NTD programmes need back-up plans to make sure that drugs are available in time for MDA, particularly in the first few (learning) years. In some settings these back-up plans may be needed if the distances between where drugs are stored and CDD residence are too far to enable reasonable pick up. As programmes mature, back-up plans become less and less important.

5. Communicating and building trust

5.1 Communication plans

Issue: The best way to avoid a communications crisis is to prepare for one

This section addresses advocacy and working with the media; communication strategies for mobilization are discussed later. A communications plan should be in place so that the Ministry of Health and partner NGOs have *a clear and mutually agreed upon plan* about how they will work together to reach target audiences with a set of clear, simple, and consistent messages about trachoma. They must also agree on specific strategies to reach audiences with those messages. Part of the plan should be about how to handle rumors that often will make community members reluctant to participate in the MDA. If rumors or negative news stories do arise, it is important to deal with the media quickly without becoming defensive. The more you have established relationships with reporters, the more likely it is that they will call you before reporting a "crisis" or they will listen more carefully to you if you do respond to a crisis news story. [See Uganda and Malawi case studies in supplemental materials] The three important elements of a crisis communications plan are clear messages, trained spokespeople, and relationships with the media.

5.2 Engaging media

Issue: If you do not engage media early on, many misconceptions may become common

One of the ways to reach the target audiences about trachoma, the SAFE strategy, Zithromax®, and MDA is through the media: local print, broadcast, and online outlets (newspapers, radio, TV and online news sites). One strategy of the communications plan should be to continually engage and educate reporters, radio DJs, TV hosts, and other members of the media about NTDs. By building relationships with local media representatives who cover health regularly or those who have an interest in the topic, you are preparing them to produce better news coverage. If you take the time to know and talk with reporters regularly, not just when there is a negative crisis or a positive story like the launch of an MDA, then they will be prepared to cover a situation in a thoughtful and competent manner when a news story arises. Do everything you can to educate reporters about trachoma, how it is spread, how it can be prevented and treated, and the impact it has on communities, especially women and children. This should also address the purpose of the MDA, potential side effects and how they can be prevented.

Elements of a Communication Plan *(Must be based on research)*

- Communication Goal
- Primary and Secondary Audience
- Psycho/social profile of audience
- SMART Objectives for each audience
- Message Concepts
- Communication Channels
- Design of Materials
- Testing of Materials
- Implementation
- Monitoring and Evaluation

5.3 Skills in working with media

Issue: Many people within Ministries of Health and partner NGOs have little experience in working with media

Spokespeople at the MoH and partner NGOs benefit greatly from media and advocacy trainings in how to engage with the media and speak through the media to the general public. Media interviews can be challenging, and often doctors and health officials need to be trained so they can effectively handle difficult questions and avoid using scientific jargon that the public doesn't understand. Health officials can learn how to deliver short messages, or talking points, that the media will want to use in their stories. In some settings media has been invited to national NTD partner/stakeholders meetings, giving them a better understanding of the programme.

5.4 Local reality

Issue: Use of media needs to be context specific

When creating and implementing a communications plan, it is important to determine exactly who your audience is and the best way to reach them. Additionally understanding the local context of media use will help to ensure the plan will work in your community. In some settings, radio (usually FM stations) is by far the most popular and easily accessed educational media outlet.

In other areas, TV and radio can be used to inform various groups about the purpose, location, and timing of a MDA campaign. Leaflets, posters, calendars, t-shirts, and caps can be used to supplement use of media for the mobilization of communities.

During a campaign, instructive or health education messages are often disseminated using megaphones, town criers, or religious congregations at the church or mosque. Important factors to consider when selecting media materials and messages include the literacy of the community, traditional methods of transmitting messages, and TV and/or radio ownership and usage. In some settings where radio ownership and radio usage is high and advertisements are not costly, the use of FM radio can be effective. Messages include information on the SAFE strategy, drug side effects, and the benefits of Zithromax®.

5.5 Evidence to guide communication strategy

Issue: The most effective communication strategies are built on evidence generated locally

MDA advocacy should be a cyclic process that uses lessons learned from previous years to strengthen future campaigns. Media messages should directly address local concerns and challenges identified in previous campaigns. For example, some communities were concerned that Zithromax® was a type of birth

Malawi "MDA Rumors" Case Study

In September 2012, a radio station in Malawi broadcast a news story claiming that ten girls at a secondary school had fainted after taking medication as part of an MDA. The radio report was quickly picked up on a Twitter newsfeed called Malawi Breaking News and the news, while actually false, spread across the Internet.

When rumors arise related to an MDA, all those involved need to act quickly to ascertain the true facts, alert colleagues and partners of those facts, and then decide together how to respond as soon as possible to correct any errors. You never want to let false information stand unchallenged. Responding quickly in a thoughtful and non-defensive manner is key.

In this case, all the proper steps were taken:

1. As soon as the office of the trachoma national coordinator heard the radio story, a team was sent to the school to **check the facts surrounding the story**. They interviewed the 10 girls who were found to be in good health with no signs of having fainted. The girls said they had complained of dizziness, headaches and abdominal pains. These effects can be manifested especially when taking the medication on an empty stomach, as was the case here.
2. Rather than simply dismissing the incident, the **participants were taken seriously** and monitored over the next several days to **stay on top of any possible developments**.
3. The school's headmaster and students were advised to not give any media interviews before checking with the national coordinator in order to **be in control of the information given to reporters**.
4. ITI had picked up the story on Twitter and emailed the national coordinator to ascertain what happened so **all parties involved know the facts** and can **disseminate the true story to all parties**.
5. The national coordinator contacted the journalist to alert him to the facts of the case and asked him to verify facts with the authorities before further reporting was done. The coordinator was careful to **adopt a neutral tone and not get defensive or angry with the reporter**, as that can create more interest and news value.
6. As the story did not gain much traction on Twitter, the decision was made to not tweet further so as to **not cause unnecessary attention to the case**. Twitter was monitored so that if there were more tweets than the facts could be **tweeted from someone with full knowledge of the facts**.

control. Improved awareness and advocacy can be used to increase coverage. Planning teams should use targeted messages in areas with low coverage that specifically address the community's concerns, whether they are barriers to attending MDA (travel time, cost or other obligations) or concerns about safety (side effects, rumors). MDA organizers should educate village and religious leaders to handle these situations. Personal testimony by people who have taken the drug before can be highly effective as it has been found that coverage usually increases from year to year as people learn the benefits of taking Zithromax®. Following one MDA, people reported that they "can see now" and are "able to work hard on the farm."

Always try to convey to your audiences and the media the evidence and experiences from the field. Personal stories are much more effective than talking in general terms. Tell the story of the mother with three children who found a way to get access to water to wash her children's faces regularly to keep their eyes from becoming infected. Or the grandmother who had advanced trachoma and could no longer sell her grain at market or care for her grandchildren due to the pain, but had TT surgery on her eyelids and found relief from pain and improved eyesight. She also was able to become a productive member of her family and community once again.

That is why it is important to engage with the media regularly, as reporters will seek out the personal story to humanize the issue of trachoma. Be willing to take them to see an MDA so they can talk to people who are taking the medicine.

5.6 Investment in communication

Issue: Invest time and money in communication and building trust

Developing political support takes a long time and requires ongoing activities. View it as an investment, because it can lead to ownership of campaign results by community leaders. Community leaders who are addressed and informed of the importance of the MDA often take personal responsibility for the success of a campaign. For example, a chief called village leaders together and instructed them to support the campaign. In some areas, social mobilization included community leaders participating in the distribution because there were not enough volunteers. Conversely, if local leaders have a negative opinion of a MDA, it can significantly damage the success of a campaign.

5.7 Campaign approach

Issue: Maintaining communication throughout the year can be difficult and expensive

Campaign-style MDAs maximize financial efficiency and time spent on media by concentrating efforts in a short period of time. It is also helps to build and maintain political support. A launch approach only requires the presence of high-level political, NGO, and donor leaders for short periods of time and is most effective with campaign style approaches. This also concentrates the efforts of all other persons responsible for community mobilization and advocacy. Finally, campaign approaches are most viable for tackling multi-year MDA plans. Consider including organizations and leaders who are influential in the community/region/country. Higher levels within the political structure may be able to encourage areas where MDA is not prioritized.

6. Micro-planning

6.1 Micro-planning for efficiency and effectiveness

Issue: In order for MDA programmes to be effective and efficient, well-coordinated micro-planning is needed at the implementation level

The principal goal of a trachoma MDA programme is to ensure that the proper dose of Zithromax® or tetracycline eye ointment is provided to each eligible person within all target geographic areas. The micro-plan is the blueprint that ensures that the correct drugs and other materials are available in the right quantities, in the right places, and at the right time to enable all participants to have access to the MDA. The delivery of just one dose to one recipient requires set timetables, the adequate ordering and distribution of supplies, allocation of resources (transportation, fuel, per diem), training of distributors and supervisors, mobilization of communities (members, leaders and local health authorities), well-coordinated distribution points and dependable management of drug, supplies, resources and distribution data. Micro-planning is a key tool that national programmes can utilize to manage these details.

Micro-planning is the stabilizing structure within which all elements of an MDA campaign are organized, planned, and managed. The micro-plan should be detailed enough to outline how a MDA can be done within a set timeframe. Although it can be a challenge to gather the right people and information to create a good micro-plan, it is an essential tool for success.

6.2 Frequency of micro-planning

Issue: Micro-planning must be done annually

Micro-planning needs to be done each year to reflect changes in strategic focus, disease prevalence and budgets and to incorporate lessons learned from the previous year's MDA. Annual micro-planning is essential for both programmes conducting MDA for the first time and already well-established programmes. The former will be able to incorporate the recommended practices in this document to facilitate their planning process before initiating their first MDA. The latter could consider these recommendations during wrap-up meeting discussions following a MDA campaign and in planning for the next one.

Coverage data from previous surveys will highlight areas of need. Understanding why coverage was low will assist in adjusting the plan accordingly. Reasons may be poor distribution of medicine, poor record keeping, low participation by the communities, insufficient human resources allocated to the distribution or weak leadership in the distribution teams. Each of these reasons will initiate a different response from the micro-planning team. Different districts may need additional sensitization, supervision, training, and/or drugs. Annual micro-planning should be based on an assessment of the distribution process, drug coverage and the report from the previous year's distribution. A micro-planning process that develops and targets any weak areas in the campaign should lead to increasing coverage year by year.

The template designed should help the national program to identify:

- The number of communities within MDA-eligible districts
- The number of people within those communities
- The number of communities each team is expected to cover;
- The number of teams needed to cover all communities per district;
- The number of teams per supervisor;
- The number of supervisors per district;
- The number of days to carry out MDA per district
- Per diem rates per person per position (training and MDA delivery)
- The number of vehicles needed to transport teams and supervisors to various communities within a district
- The amount of fuel/oil needed to manage transportation needs per district
- The number of teams and supervisors to be grouped together for training
- The number of days required to complete training for all teams and supervisors,
- The number of nights and location needed for teams and supervisors to spend in the field
- Amount of supplies anticipated per team per community (drug, pens, forms, t-shirts, hats, etc.)
- Amount of supplies needed per training (pens, handouts, food)

6.3 Standardized tools for micro-planning

Issue: Using standardized micro-planning tools facilitates efficiency and effectiveness

Templates and other tools can be used to assist with micro-planning from each year. These tools will differ from programme to programme, and usually include logistics and budget templates created in MS Excel. Excel templates might include formulas that automatically calculate the number of materials (measuring sticks, flipcharts, registers) based on the number of teams entered into the spreadsheet. Likewise, per diem can be automatically calculated based on the number of teams, supervisors, districts, and/or population.

To keep information manageable, micro-planning tools can be developed to divide the above items between supply management templates (including items related to supplies, fuel, vehicles, drug to complete both training and MDA), budget templates (items relating to cost per district/training) and logistics (placement of supplies, movement of vehicles, timing of trainings and distributions and provision of funds to cover per diems, lodging, refueling). Examples of the type of information helpful for micro-planning and templates that have been used in the past can be found in the supplemental materials section.

RTI's microplanning tool is available at this URL: **http://ntdenvision.org/technical_areas/tool_for_integrated_planning_and_costing_tipac**

The Tool for Integrated Planning and Costing, or TIPAC, is a Microsoft Excel– based program that helps users accurately estimate the costs and funding gaps of NTD programs, including all aspects of trachoma. The NTD TIPAC can be used in conjunction with existing national microplans and budgets in order to effectively plan and coordinate future program resources. The TIPAC is not a substitute for the strategic process of developing a national plan of action or program budget. However, the tool should strongly align with these documents and can help with resource planning and revising a national plan to meet resource constraints.

6.4 Engaging stakeholders in planning

Issue: All relevant stakeholders must be engaged in micro-planning

A successful micro-planning process includes all relevant stakeholders, including those familiar with the national trachoma or NTD plan. MDA stakeholders include Ministry of Health officials at the national, regional, and district levels; organizations that implement the SAFE strategy (not only those that implement MDA); health center staff; and, village representatives. Where a regional/district trachoma task force exists, the task force can take responsibility for micro-planning. The task force should invite other relevant partners to join them during the micro-planning process. Such coordination promotes transparency and accountability in both activities and budgetary responsibilities.

Essential materials for the distribution teams

- The location and quantities of Zithromax tablets and POS
- Tetracycline eye ointment
- Record books
- Stationery
- Heigh-sticks (dose-poles)
- Health education materials
- Cartons or bags to carry the materials
- Promotional materials such as caps, aprons or t-shirts, and any other items

The composition of the team responsible for developing the micro-plan should include those with up-to-the minute information on: available budget, essential materials for the distribution teams, previous micro-planning documents and templates, and documents describing the district trachoma prevalence and coverage from past MDAs.

Successful micro-planning results in capacity strengthening for all the participating partners, as each learns new skills from others with comparative advantage in those areas. Implementing partners can bring planning skills to support national and district-level micro-planning skills where they are weak. Supervisors report that the planning and budgeting skills that they have developed during the MDA planning process have been transferable to other health programmes.

6.5 Transparency of planning

Issue: Since micro-planning involves discussion of money, all aspects must be transparent

Coordination and transparency are especially important with activities that have budgetary implications. The organization(s) paying for the MDA and the pay rate for supervisors and distributors should be clear to everyone involved. Coordination and transparency ensures that trachoma activities and expenses are reported at appropriate levels and can build ownership of the campaign's success. Budgets should include *per diem*, fuel, stationery, refreshments, Zithromax® transportation, drug loading/unloading costs, vehicle rental, staff salaries, etc.

The outputs of a successful micro plan include:

- A realistic timetable
- Adequate and appropriately distributed supplies
- Effective training with clear roles and responsibilities for every team member and recipient
- Supportive supervision
- An acceptable payment plan
- Thorough Community mobilization plan
- Distribution point organization that matches the local context
- Complete and concise reporting and evaluation

Each step in the planning process requires careful consideration of *why* the process is being done, *how* it will need to be conducted and *who* is responsible making sure that it is completed successfully.

6.6 Planning a timetable

Issue: Efficient use of time equates to good use of financial resources

Start MDA scheduling by identifying the date when the distribution is planned and then work backward. Dates should be established for when each activity should be completed, including the ordering of supplies, training, distribution of materials, community mobilization, and deployment of teams. Some of these activities may actually take place 10-12 months prior to the MDA campaign. Establishing the timing of the MDA should include the community leaders and key informants who can tell the programme when villagers will be available depending on seasonal activities, religious observance, holidays, etc. They can also tell the programme where the best locations for distribution are, and respond to queries from villagers on behalf of the programme. When planning MDA, consider the agricultural calendar, climate, health services and competing health activities in the targeted area, and whether this time period repeats each year.

Micro-planners should also consider how many districts can be covered simultaneously. The number of districts planned for MDA will dictate the number of supervisors, team members, required for the MDA. Programmes have been able to treat over 9 million people in 86 districts in a single week – by training over 4,000 team leaders and 12,000 volunteers. Simultaneous MDAs can save time; however, tackling a large area at one time brings logistic challenges.

Conditionnement du Zithromax®	Pediatric Oral Suspension (POS)	Flacon de 500 comprimés de 250mg
Avg. number treatments per bottle	3	167
Number of bottles per carton	48	24
Number of cartons per pallet	32	54
Carton dimensions	36.5 x 28 x 22cm	36 x 24.2 x 16cm
Pallet dimensions	80 x 120 x 92cm	80 x 120 x 100cm

6.7 Drug movement

Issue: Drug movement should be minimized: "load once and transport once"

All distribution points and the number of trucks needed to move the drug to the distribution points should be identified in advance. Micro-planners will need to know the size and contents of the drug boxes and the storage capacity of the trucks to organize the drug in such a way that the correct number of boxes gets delivered to each site.

Drug should be treated like cash. Only authorized individuals should move the drug, and all movement between individuals or organizations should be documented. The micro-plan should specify:

- when inventories should be completed and by whom;
- who is responsible for the drug at each storage location;
- who is responsible for allocating the drug to teams;
- who can give drug to recipients; and,
- who is responsible for the return of the drug, and where it should go.

The amount of other materials, including measuring sticks (dose poles), log books, community registers, boxes, bags, caps, t-shirts, recording forms megaphones and audio equipment (if used), need to be identified and ordered with enough time to distribute to the teams prior to deployment. The plan should also outline who is responsible for

distributing materials before the MDA and collecting the materials at the end of the MDA. Finally, it should outline who will conduct an inventory of leftover supplies and where these supplies will be returned to and stored. It is very important that log books and measuring sticks are not lost as they will be required in subsequent years.

6.8 Planning for training

Issue: Training plans should be part of the overall micro-planning process

Training, discussed in greater detail in the following chapter, is also an essential component of the micro-plan. Plans for training should focus on the minimum amount of information that each team member and supervisor needs to ensure that their job is done correctly. Too much information can lead to boredom, while not enough will inadequately prepare the team member to do the job right. Cascading the training matches the correct information with the correct participants, without giving participants information that is unnecessary for their role. In scheduling the training, it is important to identify the latest date by which a team needs to be trained by in order to reach the distribution point on time. Following this schedule will allow the MDA to start on time.

Training should be repeated each year, and include:

- Trainee roles and responsibilities;
- How teams will get needed supplies, including drug;
- Where MDA will start/take place;
- Expected daily targets and overall coverage to be achieved;
- Contingency plans for when things go wrong;
- Time to practice; and,
- How to conduct supervision (for supervisors).

6.9 Managing cash

Issue: To reduce conflicts in the field, have a clearly articulated (and transparent) plan for managing cash

MDAs can involve hundreds of persons who are widely dispersed throughout the campaign area and who provide days if not weeks' worth of support to the MDA effort. Over the course of a full MDA, significant resources need to be mobilized to ensure that these individuals are accurately and timely compensated. The micro-planning effort should address how actual cash will reach those who need to be compensated. The micro-plan should detail how the necessary amounts of money will be transported, managed, and paid to distributors by the various layers of supervisors. Some programmes choose to decentralize budgeting to the districts to expedite planning. Regardless of who is designated to distribute money, checks and balances need to be in place to ensure that the money is distributed appropriately and as planned. Sharing financial responsibility between several people ensures transparency and removes opportunities for theft.

Managing payments for MDAs

Handling payments and management of finances for per diem and other field expenses has been challenging, particularly when MDA is rolled out to cover large populations and many districts.

In one setting, because of logistical limitations and cumbersome bureaucratic procedures, it was not found to be manageable by MOH and partners. This issue was discussed in a transparent fashion during a post MDA review meeting with all partners and the field staff; "outsourcing" was agreed upon. A number of potential firms suitable for this task were suggested and approached. Proposals were solicited and negotiations held with the best qualified institutions. After careful review and analysis, a credible micro-finance firm with a suitable organizational structure, wide geographic coverage, and good track record was identified. A reasonable service charge or commission (2.5%) was agreed upon and contract agreement signed. The agreement came into effect in 2010 and has been up and running for about three years (with annual contract renewal). The system is working very well and no serious problem has been encountered thus far (except very minor operational issues which were resolved instantly with the concerned admin staff).

6.10 Planning for organization of distribution strategy

Issue: There is no single approach to distribution; consider the local context when deciding on appropriate strategies

There are different ways to organize distribution points, each with their own advantages. Thought should be given to the arrangement of houses in the community, past distribution practices, and community members' perception of drug distribution. Central point distribution is most efficient at reaching more densely packed populations in rural areas. House to house mobilization reaches more sparsely populated rural areas and has also been found to work well in urban areas. A hybrid of these methods may work best in communities with a mixture of densely and sparsely populated areas. House to house distribution can also be used to reach people missed at a central distribution point.

6.11 Planning for determining coverage

Issue: Determining how coverage will be calculated should be part of micro-planning

The micro-plan should be based on treating the entire population and that coverage figures less than 80% are not acceptable. The micro-plan should explain how often coverage estimates will be calculated and reviewed, how to identify gaps and how gaps should be managed. As previously stated, coverage is defined as the number of people treated (with either Zithromax® or tetracycline eye ointment) divided by the total number of residents . It is advantageous to assess coverage during the MDA to ensure that distribution teams are doing their job: distributing the drug to the appropriate group and reaching everyone who is currently residing in the area. These assessments provide feedback to teams, allowing well-performing teams to be rewarded and teams who need guidance and/or support to be identified.

Final coverage estimates are important in determining the proportion of people reached and identifying areas where there was low coverage that should be focused for targeted supplemental campaigns or for planning for the next year. This may require conducting an assessment to double check the reported distribution numbers. Evidence from follow-up surveys used by one programme indicates that reported coverage is always greater than the actual coverage . Care should be taken in designing coverage assessments, as they can be quite expensive and time-consuming.

Micro-planning may also clarify how community registers and log books will be organized and stored e.g. binding each village and sub-district administrative unit together. The micro-plan details when and how forms are developed, printed, distributed to the teams, collected and returned to the right office.

Two examples of strategies to determine coverage

30 by 7 Coverage Surveys. This method was used first by the EPI program.

- Randomly select 30 clusters
- Randomly select a starting point and interview 7 consecutive household heads (or other household member) to find out if they received zithromax

Instructions found at: **http://www.who.int/immunization_monitoring/routine/EPI_coverage_survey.pdf**

Other less robust strategies to determine coverage include randomly visiting households to ask if their household had been covered and crosschecking with registers.

6.12 Linking micro-planning with post-MDA programme review

Issue: Micro-planning will be more evidence-driven if post-MDA programme review is conducted

The campaign organizers should conduct a programme review meeting immediately following the completion of the MDA to assess how the campaign went and make recommendations for the following year's MDA campaign or to plan impact surveys. This meeting is also a time to highlight parts of the micro-plan that need to be improved next year. 32: Picture of people in review meeting] As previously discussed, measuring coverage from distributor reports is part of the planning and evaluation processes. Measuring the coverage of MDAs will highlight the areas with successful distribution strategies to learn from and the areas that need increased supervision and support.

Conducting post-MDA programme review meetings at the district and national level will help participants more effectively plan the next year's programme.

Outline for post-MDA review meeting

a. Welcoming remark (10min)

b. Presentation of campaign summary report & coverage (30min),

c. Experience sharing by best districts (team leader, administrator, supervisor) (1hr),

d. Experience of poor districts, (team leader, administrator, supervisor) (30min)

e. Issues related to provision of campaign commodities: Antibiotics, format; and supportive supervision (30min)

f. Listing challenges encountered & remedies rendered (30min)

g. Key lessons & future directions & suggestions (30min)

h. Closing remarks (20min)

7. Training

7.1 Planning for training

Issue: Training efforts need to be well-considered in advance and based on programme needs

The safe and effective distribution of Zithromax® requires a well-planned systematic approach to training that responds directly to the needs of the programme.

Steps of Training:

(Training should be based on adult learning principles)

- Identify who is to be trained
- Determine their current knowledge and skill level
- Define the objectives
- Design the activities and necessary materials
- Monitor and Evaluate

The first step in designing a training system is to establish the objectives for the programme and thus what roles and responsibilities will be needed to achieve the objectives. You also need to determine the skills and knowledge those people will need for their assigned roles, identify the tools they will need to do their jobs, and outline how supervision at each level will be done. A good training system also needs to ensure that adequate means of motivation or incentives are in place, and identify what overall organizational support will be needed to effectively achieve the objectives. All of these factors are critical to the overall performance of drug distributors and the assurance of safe drug administration.

7.2 Standardization of training

Issue: Standardization of training programmes leads to greater efficiency and effectiveness

The national trachoma and/or NTD programme should adopt a standardized approach to training drug distributors. By standardizing the approach, and by having all stakeholders subscribe to the approach, one reduces the chances of variations that could lead to mistakes made in drug delivery. Drug reactions resulting from mistakes made during a distribution campaign can severely undermine a programme, making communities reluctant to comply; thus standardized training on side effects and severe adverse events is critical. The standardization needs to apply to the whole system and not just to the training.

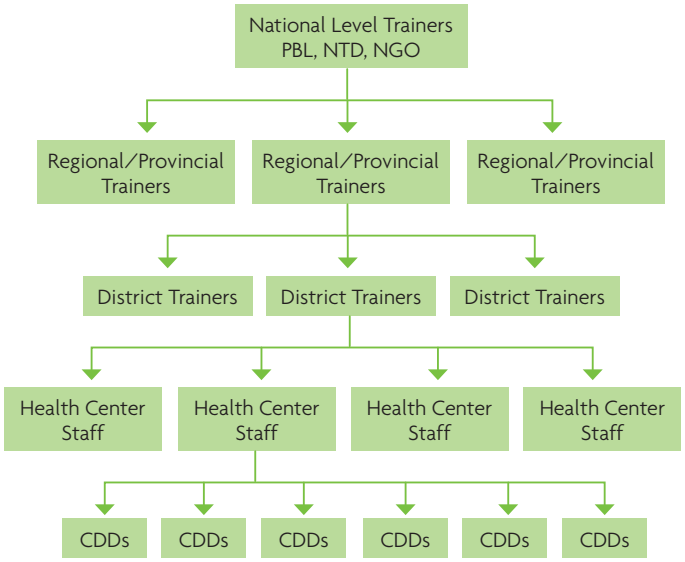
7.3 Cascade training

Issue: Cascade training efforts are more likely to lead to consistent plans and messages from top to bottom

Training for a national scale programme will by necessity demand a cascade system. In this system, several tiers of trainers are required to be able to reach all who need to be trained. To be effective, a cascade system requires one to two tiers of trained trainers. Prior to the training of the drug distributors, it is imperative that their trainers also receive the necessary skills and knowledge and similarly have the requisite support to enable them to be successful in their role.

Supervision of training systems is very important to assure accuracy of information as it passes down through the various tiers the cascade model is built upon. Those familiar with the telegraph/telephone game can use it to demonstrate how the content of a message changes as it is passed from one person to another. Supervision to ensure this does not happen is necessary.

Cascade Training



7.4 Skills of trainers

Issue: The trainers need to have the right skill set in order to teach others

Often overlooked is the training of trainers beyond the content area. Trainers are frequently selected for their technical knowledge without regard to their knowledge and experience in adult education. In addition to the technical content, trainers need to have at least a basic knowledge of adult learning principles and how these principles are applied in the actual training. These principles include treating the learners with respect and ensuring a supportive learning environment, providing them with knowledge and skills that are relevant to their work, and the recognition that adults learn best when the content is linked to their own life experiences and needs. The training also needs to involve practice and cannot rely just on the written or spoken word.

A good trainer is one that provides ample and varied opportunities for learning taking into account the various learning styles people have and focuses on the skills required.

7.5 Supervisor training

Issue: Training supervisors is just as important as training teams

In addition to training trainers, a well-trained corps of supervisors is necessary. This training should emphasize the concept of supportive supervision taking the focus away from evaluative supervision and looking primarily at how people and their tasks can be supported to improve their performance and thus the overall programme. Supervisors often lack the managerial, technical, and supervisory skills to adequately assess quality and to offer the needed support to improve programmes and their outcomes. New models of supervision will be needed such as building on a team approach that allows for more routine supervision rather than just periodic checks, permits ongoing feedback, and reduces the hierarchical aspect that most supervisory systems rely upon.

As discussed before, proper tools are necessary for a person to perform as expected and such items as supervisory checklists will assist not only the supervisor, but also will provide the programme the opportunity to respond to problems. Building a sound supervisory system requires an investment of time and money. It takes creativity and, as such, requires a cultural shift in how a programme thinks of supervision.

7.6 Staff turnover and attrition

Issue: All MDA programmes have high turnover or staff attrition

Another issue that needs consideration is the often high turnover and staff attrition. This is likely to happen at all levels of the health system. Because of the sheer numbers of community distributors that are necessary for community-based programmes it is probably most profoundly felt among this cadre of health workers. To stem attrition, an evaluation of incentives and motivations can be conducted. Within NTD programmes which have relied heavily on the volunteerism of community distributors, any incentives provided are often undermined by other programmes that provide remuneration for services. This provides an open market that few governments have stepped in to regulate, leaving NTDs at a disadvantage.

Regardless of reasons for attrition, programmes need to count on training on an annual basis. Often the number of days allotted for training will differ if the participants are new distributors as opposed to ones that have already served in this role. As the safe distribution of drugs is the major objective and as the distribution of Zithromax® for trachoma is integrated into other disease control programmes, providing annual training is advisable to avoid any confusion.

7.7 Integrated NTD training

Issue: Adopting integrated MDA requires adapting training programmes

In NTD programmes, where a variety of drug packages may be administered by the same CDD, decisions need to be made about the timing of the training. Many national programmes feel that if the educational level of the distributors is relatively low, their capacity to absorb information is limited. Thus, it is recommended to provide training of each drug package prior to the distribution of that package. This follows adult learning principles where the more immediately a skill can be applied, the better it will be performed. Conducting training prior to the delivery of each package is seen as a way to reduce confusion by distributors as to the number of tablets to be given to each individual based on height. Other countries, as their programmes have matured, have transitioned to conducting the training for each drug package at one time while others have always done it this way. Supportive supervision and rigorous evaluation are needed to ensure that the skills distributors have been trained in are being appropriately practiced.

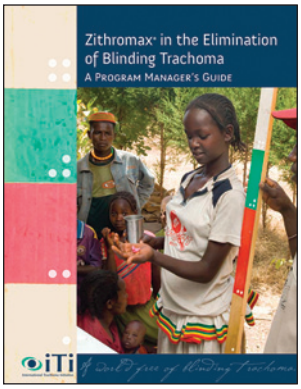
8. Personnel

8.1 Roles & responsibilities

Issue: Effective and efficient MDA requires different people with different tasks

National programmes require a team approach. Within any cadre of personnel engaged in an undertaking such as the MDA of Zithromax®, a full understanding of the role they are assigned and the accompanying responsibilities will be essential for programme success. Not only do staff need to know their individual roles, but they also need to know the roles and responsibilities of all others working within the programme. This helps teams react when problems arise. Supervisors need to share knowledge of roles and responsibilities because this is often an area that undermines performance.

In developing a team approach, the number of people will vary depending on various considerations: number of drug packages; the tasks that need to be completed; the geographic variables (terrain, population density), etc. All of these need to be planned in advance and clearly communicated throughout the health system and education system if teachers are being mobilized. In addition to roles and responsibilities, teams should know their targets and monitor their progress toward achieving their objectives. The targets should be set on a daily basis in the context of overall coverage needs for the particular catchment area.



The ITI Program Manager's Guide is a useful tool for clear, results-based planning of personnel.

8.2 Supervision of MDA

Issue: Weak supervision does not support effective MDA

Supervision is an important part of the team approach. Supervisors also need to understand their roles and responsibilities and need to be trained in supervisory skills. The ability to solve problems should be the key focus. Supervisors are needed at each level of the health system and thus the supportive approach to supervision must be part of the supervisor training. Adopting a supervisory approach, which is not central to many health care systems, may ensure that a long-lasting impact on health systems strengthening can be achieved.

The ratio of supervisor to number of teams is a decision that needs to be planned in advance taking into consideration the various levels of the health (and education) systems that are involved; the maturity of the programme and experience the individuals have; and, the resources such as transportation available, etc. Best practices suggest that a front line health worker can adequately supervise up to 5 teams of community directed distributors (CDDs), while a district level supervisor can support up to 6 distribution teams. The key element, however, is to assess the local situation and plan realistically.

As part of a team approach, routine meetings are very useful to be able to provide feedback to the teams and individuals, to address any problems that may have arisen since the last meeting, and to assess the success of any problem-solving measure instituted in the past. Open discussions among the team members

of their progress helps develop strong teamwork and greater success in their work.

All supervisors need to have the proper tools such as supervisory checklists. Such checklists, tailored for the specific level of supervision, also remind the supervisors of the various tasks that health workers are responsible for and the indicators that each task is being conducted properly.

8.3 Community Directed Intervention (CDI) programmes

Issue: CDI programmes have different personnel requirements compared to other (health worker) based programmes.

Most MDA programmes rely heavily on community volunteers, often referred to as community directed distributors (CDDs). The selection of the CDDs is by the community and is an important aspect of community commitment and ownership of the programme. The use of CDDs and other community agents as advocates strengthens the community as the primary stakeholder. They also provide an important bridge to the government health service.

Ideally, the community distributors selected should represent the demographics of the community. Though many communities are homogeneous, others are composed of different linguistic groups, ethnic origins, and religious beliefs and to better mobilize all members to participate in the programme, the CDDs should be selected accordingly.

The African Programme for Onchocerciasis Control (APOC) recommends a ratio of 1 CDD to every 150 community members, but this will vary by local considerations. Consider their workload, and recognize they are volunteers who have their own household and community tasks to do as well.

8.4 Incentives

Issue: Inadequate consideration of incentives can threaten success of programmes

Sustaining CDDs is an issue that has confronted many MDA programmes. Many countries find there is an increased demand among CDDs for incentives beyond t-shirts, caps, and other "motivations" distributed by programme. Other programmes have come into countries, recognized the value CDDs can offer to their own initiative, and have begun using cash incentives. This creates a competitive market place for CDD involvement and ultimately will undermine the use of community volunteers. It also needs to be recognized that community volunteerism differs widely by communities and cultures and for many areas a high turnover of distributors is be expected. Many NTD programmes and NGOs have increased advocacy efforts targeting Ministries of Health leadership to set national policies to govern the use of CDDs to protect a valuable community asset responsible for many of the health gains communities have made over the past years.

National programmes should consider national government negotiated and determined incentive plans or per diem rates, where appropriate. Incentives may be community-based, not individual-based. Harmonisation of policies for incentives – and procedures for giving incentives – is highly desirable but may be difficult to achieve.

Lessons learned from community drug distributors (CDDs) are important to build on and learn from; however, lessons are highly context specific. Community health workers, including (CDDs), play a large role in mobilizing communities and building trust. Their role in and commitment to MDA may depend on several factors, including whether they are paid per diem, have full-time positions and how they are selected. If satisfied with their position and adequately rewarded (in the form of personal altruism, monetary incentives, community gifts, etc.). CDDs can be a strong force in the success of a campaign. Rewards depend on the MDA coordinating organization, community leaders and community members themselves.

9. Interventions (field activities)

9.1 Early community mobilization

Issue: Early extensive community mobilization is critical to success

Community mobilization is the critical first step in MDA implementation. Once an area is found to be trachoma endemic, the programme must actively engage the community in the planning stages of MDA activities so the community feels invested in the success of the MDA.

Individuals may be wary of taking Zithromax® during the first round of MDA, so it is essential that they receive adequate health education before the activity begins. One way of providing information to the community is to educate community leaders and influential community members about trachoma and the SAFE strategy. These individuals should also be engaged in determining the best time to conduct the MDA and informing community members of the benefits of participating in the trachoma MDA and other components of the SAFE strategy. Their leadership and cooperation during the MDA is critical to the success of the distribution.

9.2 Community mobilization prior to MDA

Issue: Community mobilization one week in advance of MDA is generally of a different nature to early mobilization efforts

Several days to a week before the campaign, a variety of approaches should be used to mobilize the community. Advertisements or jingles in the local language aired on local radio station can be an effective way to provide MDA dates and a brief description of the benefits of receiving Zithromax® for trachoma prevention. Additionally, religious leaders, school teachers or other community groups can provide MDA information to their group members. Attention should be given to particularly marginalized groups, those living most distant from health facilities and women. It is recommended that community mobilization efforts are focused near the beginning of the campaign in order to provide important information in an efficient and cost effective way.

Ultimately it is up to the individual to decide whether or not they want to participate in the MDA. Providing enough information about trachoma and the benefit of taking antibiotics will help people make an informed decision. Additionally, conducting the MDA during a quiet time of year away from the principle planting and harvesting seasons will allow the distribution teams to engage the community members when they have time to participate in the MDA.

9.3 Using evidence (past successes in mobilization)

Issue: Using evidence from previous mobilization activities helps guide the planning of upcoming mobilization efforts

During and after each round of MDA it is important to monitor and evaluate the effectiveness of the strategies and materials used for community mobilization. Successful mobilization activities should be documented and used during the subsequent MDA trainings.

9.4 Community registration books (census books)

Issue: Before initiating the first MDA in a district, it is important to complete census books in the communities

Community registration books or census books are essential for planning antibiotic treatments needed during MDA and monitoring coverage. An example is given in the annex. The community census is used to forecast antibiotic need and to ensure a programme has an accurate coverage rate. The registration books should be populated several months in advance of the initial MDA in order to have an accurate census for each community. This entails listing all households in each community and developing a unique identifier (number) for each household. One individual is listed as the head of household and all family members and their age and sex are listed under the head of household's name.

Issue: Registration books need to be updated each year, before the MDA

The frequency of updating the books depends on the local context, but books should be updated at least once a year before the MDA.

Updates are usually made by community health workers but it is important for supervisors to work with the individuals to ensure the books are regularly updated and the data is recorded accurately. Census numbers from the registration books should be used for planning the number of antibiotics and the number of distribution teams needed during the MDA. Note that these population numbers may differ from nationally published statistics.

The following situations would lead to an update in the registration book:

- Children born since the census was last updated
- Woman newly married into a family and coming from another village
- Any family members overlooked since the census was last updated
- Any family members who have died since the census was last updated
- Any individuals who moved into or out of the community since the census was last updated.

9.5 Using community registration books

Issue: Identifying and recording MDA in the registration books can be a very challenging activity for community members.

The registration books should be used during MDA to improve the community-level coverage, where appropriate. During the MDA, one of the distribution team members should be responsible for identifying each person in the register and recording the treatments next to the individual's name. People can be grouped by household and each household called up to save time spent searching for peoples' names.

Supervisors confirm that records of treatment are only marked in the registration book when treatment has been observed. In rare circumstances, using a register takes such a large amount of time that people may leave, posing a risk to achieving coverage. In rare circumstances, using a register may take too much time and people leave before treatment. Having a table of contents (listing household names) at the front of the register may help.

Daily calculations of coverage allow the distributors to gauge whether or not they have reached their distribution goals, and the registration book enables the distribution team to follow-up with any households or individuals that were not yet reached during the MDA.

After the MDA, the distribution supervisor should immediately collect the registration books to summarize the number of individuals treated and tally remaining bottles of antibiotics.

9.6 Drug management

Issue: Preparing drug supplies in advance and managing the drug appropriately during distribution eases the burden on the team

To save time on distribution day, teams should prepare an adequate amount of paediatric oral suspension (POS) no more than one day before the MDA. After water is added to the POS powder, the solution needs to be used within 10 days. If there is not enough syrup in one bottle for an entire dose, first use the remainder of the bottle and add the rest that is needed from a new bottle. Empty bottles can be inverted in the box as a simple way to keep track of which ones have been used.

It is also important that the distribution teams work with community members to ensure clean water and cups are available for individuals taking Zithromax® tablets and for preparing additional bottles of the POS during the MDA.

POS cups and empty bottles can be kept by the team, recycled, disposed of in the community, or given to participants for repurposing as salt containers or whatever. If bottles are left in the village, the label should be defaced with a waterproof marking pen to prevent misuse.

Narrow spoons should be used to remove tablets from the bottles to reduce the chance of spilling the drug on the ground or touching it with fingers. Each bottle should be finished completely before opening a new bottle. Any bottle that is partially full at the end of distribution should be counted as a half bottle on tally sheets. Tablets should not be combined with another bottle because if there is a product recall due to any issues with Zithromax®, each bottle has specific manufacturing information. It should be noted that open bottles of tablets have the same expiration date as closed bottles.

9.7 Observed treatment

Issue: All treatment should be observed

All treatments should be taken at the distribution site in front of the distributor. Children under 5 years of age should attend the distribution with their parents or another responsible adult. Although many children and their mothers expect that medicine may not taste good, Zithromax® has a pleasant sweet cherry-vanilla-banana flavor which children really enjoy. If

the child is struggling, the parent can offer a drop of the solution to taste if they are initially reluctant. The mother or distributor should not hold the nose of the child and pour the POS into their open mouth. If the child continues to be agitated, the adult should move the child out of the treatment line to be treated at a quiet area away from the crowd, but stay near to the distribution site where treatment can be directly observed. Do not force a child to take the medicine.

9.8 Distribution point management

Issue: Proper management of community level distribution can help to avoid dosing and recording errors

Distribution teams need to ensure that the environment surrounding a distribution point is both inviting to the community and manageable to encourage proper and safe dosing and accurate record-keeping.

Establishing "stations" within a distribution point can help manage the flow of community members and decrease stress for team members. For example, there can be stations for health education, registration and dosing. Some programmes have found that creating a visual barrier on the ground (line of stones or branches) and giving instruction to community members that they are not to cross it until invited to do so gives everyone (community and team members) a guide of how to proceed during the MDA. Having a calming station can also be very useful for mothers with children who resist taking the drug. Providing them a space to take the child helps reduce the child's anxiety, and increases their likelihood of drinking the POS.

Alternatively, distribution teams may have community members line up by gender and/or age categories to facilitate arrival at the distribution point. Community members can line up by: adult/young adult male, adult/young adult female, women with infants/toddlers, and children.

It is important to respect participant's time. One way to do this is to call families one-by-one, giving priority to those with infants and send the representative from families represented by one member to go and collect the other household members.

9.9 Mobile and vulnerable populations

Issue: MDA should reach all persons in a given area even if they are not in the census book

To ensure a successful MDA, national programmes should plan to identify, count, and distribute to all mobile and vulnerable populations within endemic communities. By doing so, the realistic need of drug can be estimated. It also increases the ability of the programme to reach 100% coverage of endemic communities.

Some groups living in more temporary locations are more difficult to reach during an MDA. For example, pastoralists and other nomadic groups travel from place to place and their exact location may not be known during an MDA. Likewise, there are other groups that live in temporary settings, including prisoners, boarding school students, internationally displaced persons, soldiers, and street children. For these populations, it may be impractical to include them on the census registers. Even so, it is important for national programmes to identify where these populations may be located within endemic communities to ensure their participation within the MDA. Some of these populations may be particularly vulnerable to disease and if they are not treated, they may infect others when returning to their disparate home communities.

Finally, it is important to reach all persons in order to ensure an accurate supply of drug and capture accurate coverage. Recording the names of all persons taking drug, even if not in the formal census, will prevent teams from duplicating efforts.

9.10 Recording adverse events

Issue: Recording adverse events is the responsibility of all members of the team

Zithromax® is well tolerated with a low incidence of adverse events. Communities undergoing treatment should be informed in advance that some people will have these reactions. Adverse Events (AE) for trachoma are defined as: any untoward medical occurrence in a patient administered a Pfizer product or medical device.

Serious adverse events (SAE) are extremely uncommon, but if they occur, they must be addressed immediately. Serious events include death, life-threatening condition, in-patient hospitalization or prolongation of existing hospitalization, persistent or significant disability/incapacity, congenital anomaly or birth defect, cancer, or overdose (accidental or intentional). The person should be taken to visit a health institution for care. SAEs should be reported to Pfizer immediately through the designated Pfizer regional offices listed in the MOU between ITI and the national programme

Team members should report all other adverse events to Pfizer within 24 hours. All Product Quality Complaints should be reported regardless of if there is an associated Adverse Event.

9.11 Referral of trichiasis and cataract cases

Issue: Distribution teams will likely be presented with trichiasis and cataract cases and need to have a management plan

Plans for trichiasis, cataract, other ocular problems, and other NTD morbidity referral and surgery should be developed before the MDA, and all drug distributors and supervisors should be aware of these plans. If any individuals with trichiasis and/or cataract attend the distribution, they should be educated about the services provided and their name, village, and a contact phone number (if available) should be recorded in the register for follow-up.

9.12 Reporting and debriefing

Issue: Reporting and debriefing at the end of MDA helps inform future efforts and provides an opportunity to identify lessons learned

MDA debriefings are extremely helpful in collecting supplies and providing distribution teams the opportunity to provide valuable information on the successes and challenges of distribution in their community. The meeting should be held immediately after the MDA. Best practices identified during the meeting should be incorporated in the training manual for the next round of MDAs.

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