

Quality Improvement Model to Improve MDA Coverage in Zou Department

Benin

Developed by:

Dr Diane Ehoumi Dah-Bolinon
Dr Ines Dossa, Dr Franck Sintondji
Dr Kisito Ogoussan*
Mr Bolivar Pou, Dr Achille Kabore
Mr. Joseph Shott

May 2023



OBJECTIVE

USAID's Act to End NTDs | West Program or Act | West supports the elimination and control of neglected tropical diseases (NTDs) in Benin. Mass drug administration (MDA) recommended by the World Health Organization (WHO) for the elimination and control of preventive chemotherapy NTDs (lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases and trachoma) has been implemented routinely in endemic districts since 2013.¹

After failing the transmission assessment survey for Lymphatic Filariasis (TAS 1) in the districts of Ouinhi, Zagnanado, and Zakpota of the Zou department, the quality improvement (QI) process for MDA was initiated in 2020.² This process uses a collaborative approach to QI at the community level. Nine QI coaches have been trained at the national, departmental, health zone and communal levels to facilitate the QI process in these districts.

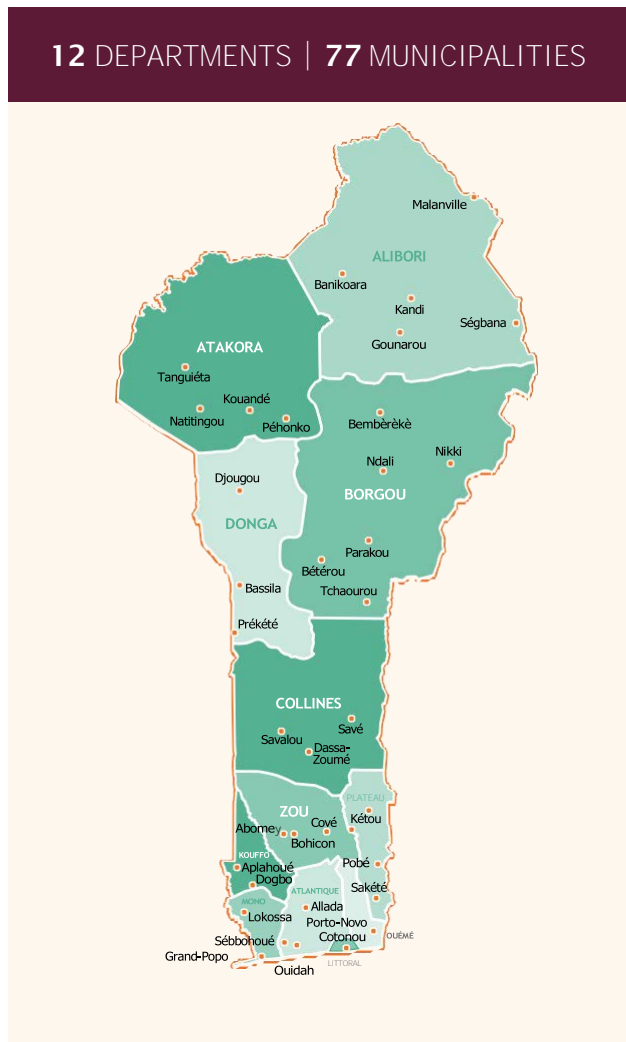
Problem Analysis

On April **22–23**, 2021, the **Benin's** National Program for the Fight against Communicable Diseases (PNLMT, the national program responsible for NTDs elimination and control) with technical assistance of FHI 360 through **USAID's** Act to End NTDs | West (Act | West) project investigated the TAS failure in the three QI application pilot districts of Ouinhi, Zagnanado, and Zakpota in the department of Zou. The investigation identified two primary challenges hindering the quality of MDAs: low therapeutic coverage and high number of cases of refusal to take the medicine.

Through a root cause analysis,³ stakeholders identified several reasons for this low MDA performance:

- Low pre-campaign social mobilization
- Lack of a monitoring system for town criers
- Lack of involvement of some local authorities in social mobilization and organization of the MDA
- Population hesitation towards community drug distributors (CDDs) who do not wear professional lab coat
- Lack of communication on the management of side effects
- Insufficient number of CDD teams assigned to MDA in some villages
- Weak local supervision
- Lack of clear procedures for CDDs to notify supervisors of refusals
- Inappropriate campaign timing

FIGURE 1: Benin Administrative Map



12 DEPARTMENTS | 77 MUNICIPALITIES

Collaborative QI Design

To encourage achievement of community-based MDA's effective therapeutic coverage goals in a sustainable manner, the PNLMT with FHI 360 technical support designed and implemented an improvement effort based on the seven **key features of the Institute for Healthcare's collaborative model**.⁴

1 QUALITY IMPROVEMENT AIMS AND OBJECTIVES

In the three selected districts (Ouinhi, Zaganado, and Zakpota), community stakeholders established sub-district level QI teams (QITs) at the pilot sites. The teams met in November 2021 to develop quality improvement action plans based on the following objectives:

- Increase the therapeutic coverage rate in all sub-districts of the districts that had not reached 85% in 2020 to 85% and more during 2021 community-based onchocerciasis MDA and maintain the therapeutic coverage rate of all sub-districts that achieved at least 85% in 2020
- Reduce the number of refusal cases as follows during the 2021 community-based onchocerciasis MDA:
 - » Ouinhi district – from 544 to ≤ 109
 - » Zaganado district – from 153 to ≤ 75 in
 - » Zakpota district – from **364** to ≤ 109 in

2 QUALITY IMPROVEMENT MONITORING

Each QI team developed monitoring indicators focused on treatment coverage of the onchocerciasis 2021 MDA campaign in sub-districts and reduction in the number of refusal cases (see Results section). Data were shared among team members, including the health zone NTD focal point and the departmental level.

3 OPERATIONAL STRUCTURE

The PNLMT and Act | West established QI teams at the sub-district level, one QI team in each sub-district in the pilot districts. The QI teams comprised 25 CDDs, 19 opinion leaders/local elected officials, 16 school principals/school representatives, 25 head nurses and three district physicians (the head physician in each pilot district). The following table shows the breakdown of team members by district.

TABLE 1: Pilot survey activities and countries

	Community drug distributors	Opinion leaders/ local elected officials	School principals/ school representatives	Head nurses
Ouinhi	5	5	4	5
Zagnanado	7	7	5	8
Zakpota	13	7	7	12

The sub-district QI team members in each district met regularly at the local level, particularly during MDA, to discuss challenges and improvements.

4 COACHING SYSTEM

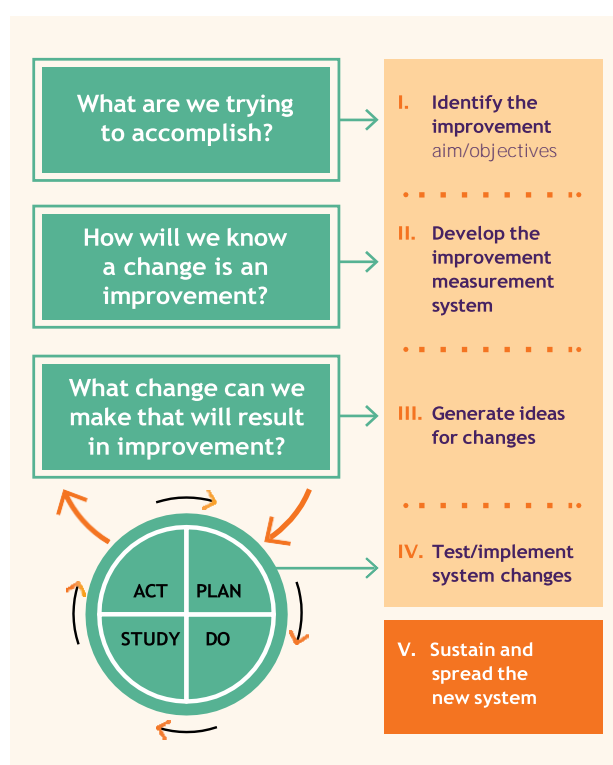
A coaching system was put in place to facilitate and support teams in implementing changes and measuring their impacts. In October 2020, Act | West program trained nine QI coaches, including a mix of district head physicians, health zone NTD focal points, key actors at the departmental level, the chief of the public health and health intervention unit, the chief of the epidemiological surveillance, and health intervention and research unit and actors from

the NTD program national level. Coaches are also champions who are expected to promote best practices and extend them through visits to new sites.

5 QI MODEL

A PDSA-based⁵ (plan, do, study, act) improvement model was applied to identify and implement changes and test their impact during specific **action periods** (see “FHI 360 QI Model”).

FIGURE 2: FHI 360 Quality Improvement Model



6 CHANGE PACKAGE

A change package consisting of a combination of explicit elements, standards and evidence-based best practices for organizing the mass treatment campaign was agreed upon. Following is a list of key changes implemented by the QITs:

- Involve the village chief in validating each **village’s** household map for use during the campaign.
- Organize meetings with leaders and dignitaries of each village on the benefits of onchocerciasis MDA.
- Develop a standard message to be disseminated by the town criers and use surveys in some villages to ensure messaging was accurately broadcasted by town criers.
- Reinforce organization of pre-campaign community awareness sessions on onchocerciasis, with a focus on areas of refusal or resistance.

- Strengthen supervision with QITs involvement through the implementation of interviews in the villages to verify the effective visit of the CDD teams for census and drug administration.
- Develop refusal case management procedure for the CDDs.
- Organize exchange meetings between QITs of each district to share proven practices and scale up implementation in new sites.

7 LEARNING SESSIONS

Learning sessions gave QI teams members the opportunity to be trained, share their experiences as supported by monitoring data, and learn and plan how to replicate best practices. Act | West supported the PNLMT to hold two learning sessions prior to the implementation of the year 2021 onchocerciasis MDA campaign. These sessions helped to determine root causes of low performance and validate the QI action plan. An additional session was held in February 2022 to review the impact of the enacted QI action plans, and other sessions are planned to expand the initiative to additional sites.

Results

The following results are based on an analysis of quality improvement indicators collected by the QITs after the implementation of the QI activities before and during the November 2021 onchocerciasis MDA campaign.

OBJECTIVE 1: INCREASE COVERAGE RATES

All six sub-districts in Zagnanado achieved more than 85% effective treatment coverage during the Onchocerciasis 2021 MDA. However, two of eight sub-districts in Zakpota and one of four sub-districts in Ouinhi did not achieve more than 85% effective treatment coverage.

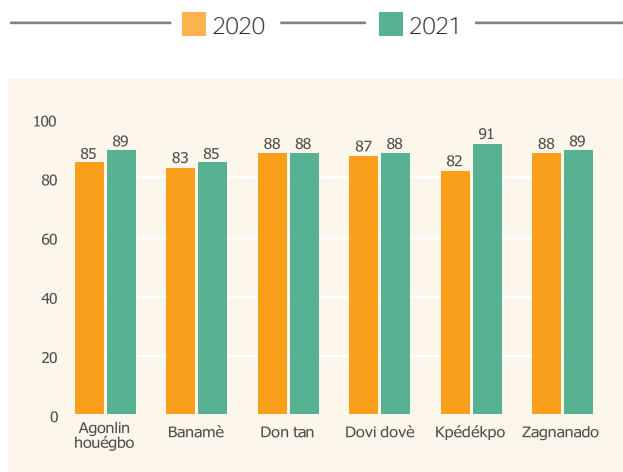


FIGURE 2: Sub-district Onchocerciasis MDA treatment coverage in 2020 and 2021 in Zagnanado district

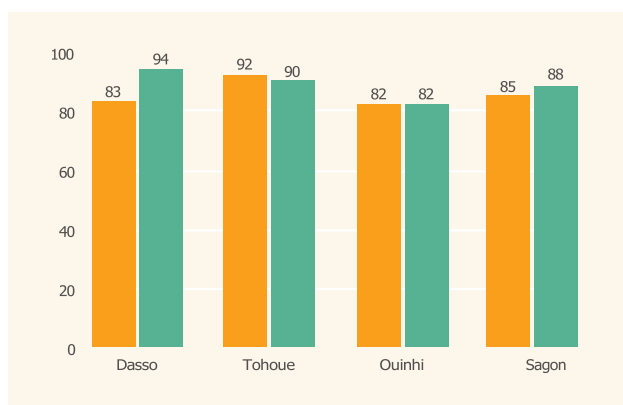


FIGURE 3: Onchocerciasis MDA treatment coverage in 2020 and 2021 in Ouinhi's sub-districts

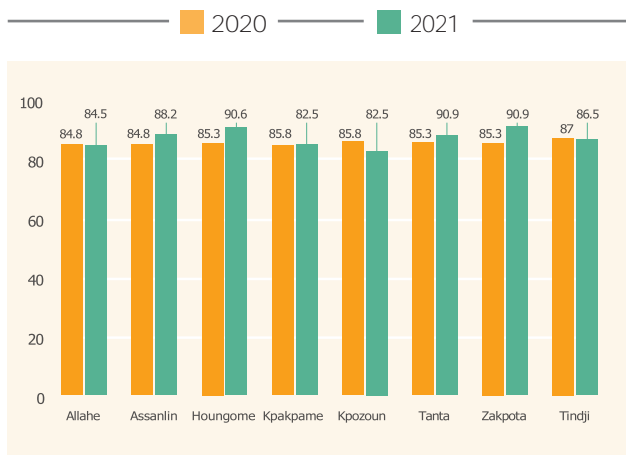


FIGURE 4: Onchocerciasis MDA treatment coverage in 2020 and 2021 in Zakpota's sub-districts

QITs reported the following issues:

- Local supervision was insufficient, due to conflicting activities by the head nurses who had another community-based immunization campaign to supervise in the same period as the onchocerciasis MDA.
- Additional funds were not allocated by the PNLMT to support QITs who would have appreciated financial support to cover their travel expenses, particularly for villages where households are distant or hard to reach villages.

Improvements noted were the result of the following changes:

- The village household maps used during the campaign by CDDs were validated with the village chiefs.
- MDA campaign supervision was strengthened by the QITs through:
 - Regular monitoring of CDDs by QITs and head nurses
 - Implementation of surveys by QITs in the villages ensured the effective visit of the CDDs for the population registration and drug administration
- Increased number of CDDs teams trained on the refusal management procedure were allocated to specific sub-districts with

hard-to-reach villages to allow optimal coverage of villages during the defined MDA campaign period.

OBJECTIVE 2: REDUCE NUMBER OF REFUSAL CASES

The number of refusal cases was reduced in two of the three pilot districts during the 2021 onchocerciasis MDA campaign through implementation of QI charter activities. In Ouinhi district, the number of refusal cases was reduced from 544 in 2020 to 17 in 2021. In Zakpota district, the number of refusal cases was also reduced from 364 in 2020 to 229 in 2021. In Zagnanado district, refusal cases increased slightly from 153 in 2020 to 158 in 2021. However, only in Ouinhi were the QI objectives related to refusals achieved.

QITs reported the following issues:

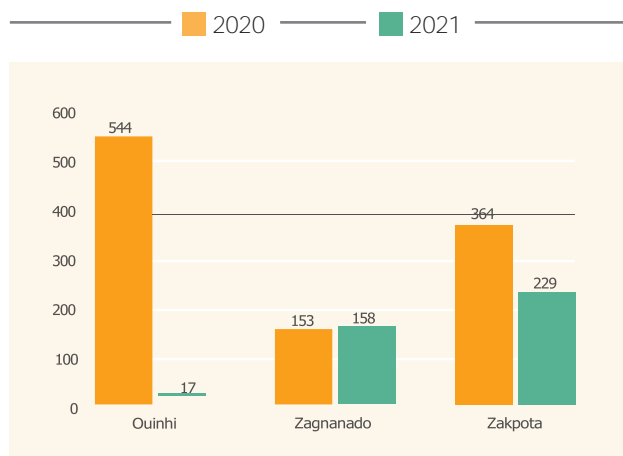


FIGURE 5: Number of refusal cases in 2020 and 2021 for the pilot districts

- Absence of onchocerciasis picture boxes for visual support during community awareness or sensitization and information education and communication sessions.
- Greater population hesitancy to take the drugs was related to negative COVID-19 vaccination rumors, as the vaccination

campaign was taking place at the same period of the onchocerciasis MDA campaign.

Improvements noted as the result of the following changes:

- Refusal cases were systematically recorded and followed up, along with additional remedial actions.
- QITs helped organize pre-campaign community awareness and/or onchocerciasis sensitization sessions focused on areas of refusal.
- QIT members held additional meetings with the village opinion leaders and dignitaries on the benefits of onchocerciasis MDA; these complemented meetings with the village chiefs only that were held during the previous MDAs.
- With the contribution of school principals who are QIT members, social mobilization sessions with students/parents were organized prior to the MDA campaign.
- The district physician and head nurses developed a procedure for managing refusal cases that they have shared with the CDDs.

The Way Forward – Scale-Up

All three pilot districts saw improvement in their therapeutic coverage during the onchocerciasis 2021 campaign over the 2020 MDA campaign.

Ouinhi district's treatment coverage increased from 84% to 88%, Zagnanado district's coverage increased from 86% to 88%, and Zakpota district's coverage increased from 85% to 87%. As a result, the leaders of the Benin National Neglected Tropical Disease Control Program decided to expand the QI initiative to four new districts in 2022: Kétou, Dassa-Zoumè, Savè and Ouèssè. In September 2022, selected QI coaches from the new districts participated in a QI training and

learning session for coaches, and NTD district offices authorities adopted the QI framework which will be implemented during the FY2022 onchocerciasis MDA scheduled in November 2022. Act | West will support scaling up QI application including promoting exchange visits by coaches between the pilot districts and the new sites. In addition, Act | West plans to support the expansion deployment of the onchocerciasis MDA QI application to six new districts in 2023.

Act | West will assess the QI application in collaboration with the pilot site QI team members and coaches at the National Neglected Tropical Disease Program (NNTDP) to identify a high-impact package of changes that led to improvement. These will be recommending them for scaling-up to new districts. The results to date indicate some continued hesitancy among community members in some villages to take the drug (refusal cases); QI efforts will focus on improving community participation into MDA.

Act | West will also support the NNTDP to share experiences and key issues identified in the pilot site learning sessions at the national ministry of health (MOH) level.

Engaging the community in the onchocerciasis MDA remains a challenge, especially for health workers and head nurses. This is due in part to fewer cases of people affected by the disease as the country moves towards elimination. It is also due to hesitancy to take the drugs based on negative rumors. Close supervision and support are also lacking in some settings, as head nurses have competing priorities. Including local elected officials, opinion leaders, and school representatives in community mobilization and strengthening supervision by QITs are key to this QI approach. By implementing a collaborative QI approach, the Ministry of Health and Act | West Benin are continuously capturing

relevant knowledge to establish and expand best practices of high-quality services and ensure the sustainability of MDAs and NTD interventions.

Quality Improvement Team

Dr. Batcho Wilfrid

National NTD Program, Ministry of Health, Benin

Dr. Nekoua **M'PO N'Koué**

National NTD Program, Ministry of Health, Benin

Mr. Tchebe Romaric

National NTD Program, Ministry of Health, Benin

Mr. Bertrand Satognon

National NTD Program, Ministry of Health, Benin

Dr. Djenontin K. Edith

District Chief Medical Officer, Zou,

Ministry of Health

Mr. Assogbakpe Raoul

Chief Data Manager, Zou, Ministry of Health

Dr. Guezo-Mevo Blaise

Chief Medical Officer of Health Zone, ZOBOZA,

Ministry of Health

Dr. Davodoun F. Paulin

Chief Medical Officer of Health Zone, CoZO, Benin.

Dr. Ogoni K. Hénok

Chief Medical Officer of Health Zone,

Zakpota, Benin

Mr. Djossou Evariste

NTD focal point, CoZO Health Zone, Benin

Dr. Ehoumi Dah-Bolinon Diane, FHI 360 Benin

References

1. USAID. Bur. for Global Health. Ofc. of Health, Infectious Diseases, and Nutrition, December 2019. The ENVISION impact: final report, September 30, 2011 - December 31, 2019. (https://pdf.usaid.gov/pdf_docs/PA00WB3N.pdf)
<https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTU1OTMw>

2. ENVISION. August 2019. How to Respond When NTD Survey Results Show that More Mass Drug Administration (MDA) is Needed.
3. Langley G, Moen R, Nolan K, Nolan T, Norman C, and Provost L. 2nd Edition The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. Jossey-Bass. 2009.
4. The Breakthrough Series: **IHI's** Collaborative model for Achieving Breakthrough Improvement. Innovation Series 2003.
5. Massoud R, Askov K, Reinke J, Franco L M, Bornstein T, Knebel E, and MacAulay C. 2001. A Modern Paradigm for Improving Healthcare Quality. QA Monograph Series 1(1) Bethesda, MD: Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project.
<http://www.hciproject.org/node/899>
6. Perla R, Provost L, Murray S. The run chart: A Simple Analytical Tool for Learning from Variation in Healthcare Processes. *BMJ Qual Saf* 2011; 20:46e51.
7. Sara R, Marthe A, Ramzia A. September 2014. A community Collaborative Approach to Improving Community Health Worker Performance and Retention in Benin.
<https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=MjAwOTgz>
8. Quality Improvement Handbook: A guide for enhancing the performance of health care systems, @ 2017 FHI 360
9. Institute for Healthcare Improvement, QI Essentials Toolkit
10. The Quality Improvement Coach Handbook, A Toolbox for Supporting Quality Improvement Teams and Efforts, November 2019 @ FHI 360.

This brief was developed by Dr Diane Ehoumi Dah-Bolinon, Dr Ines Dossa, Dr Franck Sintondji, and Dr Kisito Ogoussan, FHI 360. For questions, please email kogoussan@FHI_360.org.