

Integrated community case management

Empowering communities to test and treat malaria at the household level

About the Program for the Advancement of Malaria Outcomes

While mortality from malaria has drastically decreased in Zambia over the past decade, over five million cases are reported annually. Malaria prevalence varies between and within districts and is endemic across all ten provinces. The Government of the Republic of Zambia (GRZ) has set ambitious timelines for the elimination of local malaria infection and disease in the country.¹

The Program for the Advancement of Malaria Outcomes (PAMO) is a flagship malaria program for the U.S. government President's Malaria Initiative (PMI) in Zambia. PAMO helps the GRZ accelerate progress toward eliminating local malaria infection and disease. Implemented by PATH in partnership with Jhpiego and the Broadreach Institute for Training and Education (widely known as BRITE), PAMO supports the GRZ at the national level through the National Malaria Elimination Programme (NMEP) and in four high burden provinces: Luapula, Muchinga, Eastern, and Northern.

PAMO's strategy focuses on:

- Increasing effective coverage of proven malaria interventions in alignment with the National Malaria Elimination Strategic Plan.²
- Strengthening management capacity of provincial and district Ministry of Health personnel to provide oversight and supervision of delivery of malaria interventions.
- Strengthening the health management information system at the provincial and district levels to improve data reporting, analysis, and use for decision-making.

Integrated community case management of malaria

Integrated community case management (iCCM) is an equity-focused strategy that promotes early recognition, prompt diagnosis, and treatment of preventable illnesses—such as diarrhea, pneumonia, and malaria—by providing services at the household level.³ Trained community health workers (CHWs) extend the reach of diagnosis and treatment by engaging families and individuals with limited access to health facility services.

The NMEP prioritized iCCM as a core intervention to reduce the malaria burden by expanding access to diagnosis and treatment of malaria at the community level. The NMEP plans to train and deploy 36,000 CHWs by 2021 to saturate all health facility catchment areas with CHWs in Zambia.⁴ Several partner organizations such as the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Malaria Control and Elimination Partnership in Africa (MACEPA); the Churches Health Association of Zambia (CHAZ); Isdell:Flowers Cross Border Malaria Initiative; and the Rotary Club are supporting the GRZ to achieve that goal. PAMO is supporting the GRZ in training and deploying CHWs in the aforementioned provinces.

Selecting, training, and deploying community health workers

CHWs are selected by several community stakeholders (health facility staff, neighborhood health committee members, and local community leaders) based on specific criteria stipulating that the CHW should: be a trusted member of the community, be able to guarantee confidentiality, be able to read and write, be able to speak the local language, reside in that community, have sufficient time to provide the required services, and be willing to work without pay. Once selected, the CHW is trained in iCCM. In conjunction with the NMEP and using a GRZ-approved curriculum, PAMO trains CHWs through an intensive, six-day, theory-based program provided by master trainers from the Ministry of Health followed by a six-week practicum where they are attached to a health facility. A dedicated health care worker supervises and observes their competencies. The training curriculum for malaria covers the following topics:

- Overview of the National Malaria Elimination Strategic Plan.
- Description of the mosquito life cycle and introduction of malaria prevention methods.
- Malaria testing and confirmation using rapid diagnostic tests (RDTs), and when to use referrals.
- Description of how to prescribe and administer malaria medicines to treat confirmed malaria.

IMPACT AT A GLANCE

2,533 CHWs trained and deployed.

260 iCCM supervisors trained.

506 CHWs trained in DHIS2 data submission.

98% of positive cases treated by CHWs.

314,702 under-five children tested for malaria.

All **119,838** children who tested positive were treated.

*Data represent PAMO's impact from June 2018 to February 2020.

¹ <https://www.nmec.org.zm/malaria-overview>

² <https://www.nmec.org.zm/malaria-elimination-strategic-plan>

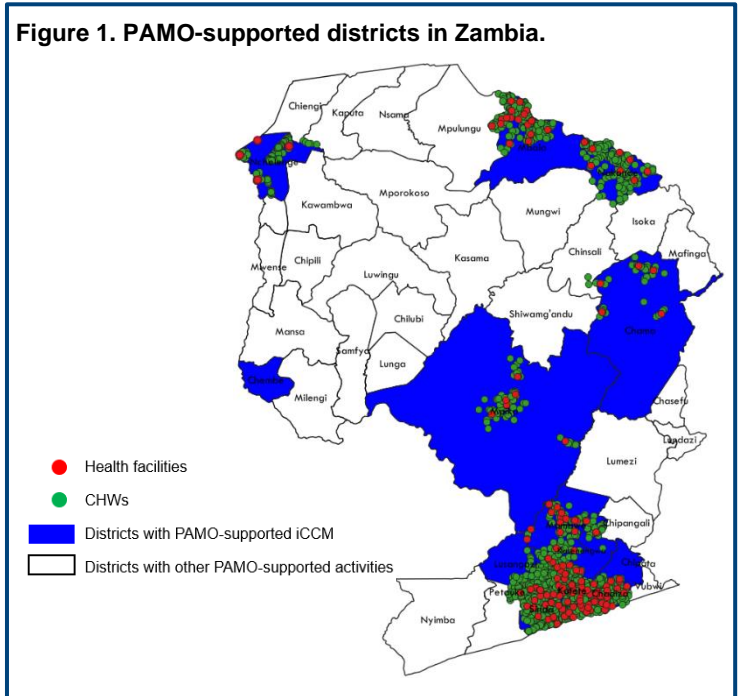
³ https://www.who.int/malaria/areas/community_case_management/overview/en/

⁴ NMEC, 2019 target projection

- Case management through onsite treatment of uncomplicated cases with anti-malaria tablets and health facility referral for severe cases.
- Reactive case detection in low-burden areas by targeted follow-up of confirmed malaria cases, screening of household members, and treatment of those found with malaria.
- Infection prevention and waste management and disposal.
- Interpersonal relationships, communication, and code of conduct.
- Data recording for case management using hard copy registers and reporting using cellphones.

Each CHW is linked to a health facility and is responsible for approximately 500 to 700 people in their catchment area. Health facilities provide CHWs with malaria test kits, RDTs, artemisinin-based combination therapy (ACT) to treat uncomplicated malaria, gloves for hygienic delivery of services and infection control, registers to record their services, and sharp boxes and biohazard bags to dispose of medical waste at the facility. Figure 1 shows PAMO's efforts in saturating CHWs in selected health facilities in supported districts.

Between June 2018 and March 2020, PAMO trained and deployed 2,533 CHWs in 12 districts across the four provinces making a 7% contribution toward achieving the national target. To enable and motivate CHWs, PAMO has provided each CHW trained in iCCM with a bicycle to facilitate transport, a cap and t-shirt for ease of identification, a bag to carry supplies, and a flashlight to use when providing services in the dark. To ensure that CHWs deliver safe and quality malaria case management services, PAMO has trained 260 iCCM supervisors who are based out of facilities. On a monthly basis, the iCCM supervisors meet with the CHW to replenish their supplies, inspect iCCM registers for data quality and accuracy, and provide mentorship on malaria diagnosis and treatment.



Managing malaria at the community and household level

When a client suspects they might have malaria, they seek out a CHW who then verifies if the symptoms suggest malaria (passive case detection). If the CHW suspects the client is suffering from malaria, they test the client using an

Jealous Kankomba (pictured, right) is one of the 276 trained community health workers (CHWs) serving Nchelenge District, an area with a high malaria burden. His village has 188 households with an estimated population of 1,395. On average, Jealous consults with 80–100 clients every month, often saving them the trip to the Kefulwa rural health center five kilometers away. Jealous values his role as a traditional leader and a CHW. “Here, where we live,” he explains, “malaria is very high. A lot of people suffer from it. But I am confident that with the programs we are implementing now, we can reduce malaria in Zambia.”

RDT. If positive for malaria, the CHW will provide treatment using ACTs, ensuring that the first dose of treatment is taken in their presence. The CHW counsels the client on the frequency of taking the medication, the importance of completing treatment, when to seek care, as well as adopting behaviors that prevent malaria such as consistent use of insecticide-treated nets, accepting indoor residual spraying in homes, and larval source management. The CHW records the client's details, symptoms, test results, and location in the “passive case detection” register. The CHW also probes about recent travel to inform inter-community malaria activities.

Leveraging information technology to report cases

Twenty percent of the CHWs trained by PAMO in iCCM are considered “data CHWs”; they collect and submit data to the DHIS2 database on the number of people tested in passive and active case-finding, positive cases, cases treated, and those referred to health facilities for further management. Other data include reporting on clients that traveled from outside of the district in which a CHW resides which helps track the number of imported positive cases into the district. PAMO has provided a mobile phone and airtime credit to these CHWs so they can send their reports. Data CHWs meet with other CHWs and their supervisors monthly at the health facility to review the data in hardcopy registers, correct errors, and transfer data to mobile phones. Other CHWs are given smaller amounts of airtime credit in their personal

phones for data submission to the data CHWs who then submit to the DHIS2 database of the NMEP for analysis and use in decision-making.

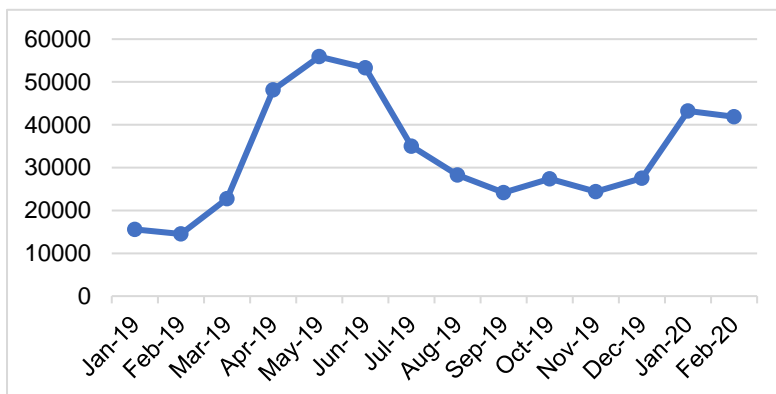
Accessing and utilizing malaria services

Between January 2019 and February 2020, PAMO-supported CHWs test 1,249,276 people for malaria, of which 471,190 (37.7%) tested positive. Among those that tested positive, 461,870 (98.0%) received malaria treatment. Reasons for the 2% who tested positive but did not receive treatment from CHWs include pregnancy or showing signs of severe malaria—two situations that require specialized skills and therefore warrant CHWs referring these cases to health facilities. Figure 2 shows the number of people treated between January 2019 and February 2020. Through effective malaria treatment at the community level, PAMO contributes to averting severe malaria and possible deaths.

Saving children under five years old from severe malaria

Children under the age of five are the most vulnerable group affected by malaria; if not treated within 24 hours, cases may become severe and sometimes fatal. If the child presents with convulsions, skin rashes, or other signs of severe malaria, the CHW immediately refers the child to the health facility for specialized care. In PAMO-supported provinces, a total of 314,702 children under the age of five have been tested for malaria by CHWs, of which 119,838 were found positive and treated accordingly or referred.

Figure 2. Number of people treated for malaria in four PAMO-supported provinces, January 2019 to February 2020. The expected seasonal pattern is observed.



Lessons learned in rolling out iCCM

In the four PAMO-supported provinces, communities are bringing high-quality malaria care to the doorsteps of families. In the roll-out process, PAMO has learned three key lessons:

- Community-led processes are important:** Throughout the iCCM process, the community was empowered to take the lead. In addition to selecting individuals to be trained in iCCM, community members also participate in raising awareness about the availability of malaria services in their communities, which has increased acceptance of CHWs at the community level.
- Health facility linkage to CHWs is necessary:** Health facilities strongly support the work of CHWs, providing commodities and continued monitoring and quality assurance.
- Technology is useful for tracking malaria data at the community level:** Phones distributed to select CHWs have shown that by using basic technology, quality data can be tracked at the community level. CHWs not only understand the importance of data, but also participate in analysis and use for decision-making at the community level.

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