

# Reimagining the fight against malaria in Serenje

## How Community Health Volunteers, bicycle ambulances, and rectal artesunate save lives

Dr. Haachile Moonga, District Director of Health Services, Serenje District, Zambia

Serenje is a beautiful district. However, it is also complex. The landscape is a mixture of plateau, valleys and swampy plains. Communities are scattered across these different terrains, often far from the health facilities that serve them. From a health perspective, this geography creates serious challenges.

One of the biggest is access to healthcare. We have relatively few health clinics compared to the number of communities spread across the district. Many families live very far from these facilities, and you find people walking distances of over 30 kilometres just to access healthcare.

When someone is ill, especially a child with malaria, that distance can be the difference between life and death.

In the past, we also faced challenges with the availability of medicine at the community level. You might have a trained community health volunteer, but without the drugs they need to treat patients. Fortunately, that situation has improved and supplies have become more consistent.

Nevertheless, even when families manage to reach a clinic, they face other difficulties. If a patient must stay at the facility for several days, the family may struggle to afford food, soap or other basic necessities during that time. These economic pressures can make accessing care even harder.

**All of these challenges highlight one important truth: healthcare must begin in the community.**



Community Health Volunteer Ruth Kalunga demonstrates assessing a child with suspected severe malaria

### Health begins at the community level

I come from a family that has a medical background, and I learned early that health begins at the household level. If healthcare is important in the home, then it must also be important in the community.

Many deaths could be avoided in remote communities if people knew when to seek healthcare and if healthcare was brought closer to where they live.

That is why community health volunteers are so important.



A mother and her child in a bicycle ambulance

**To me, these individuals are superheroes. Most of them are farmers or community members with families and responsibilities of their own. Yet they come in and give themselves and say, 'Hey, I think I want to work for my community.'**

We work with health facilities to identify people who are trusted and respected in their communities. When they volunteer, we provide training with support from partners and the Ministry of Health.

They are trained using the Integrated Community Case Management (ICCM) package. This programme equips them to recognise and treat common illnesses at community level.

For example, their training includes:

- How to identify the danger signs of severe malaria in young children
- How to recognise the danger signs of a maternal emergency in pregnant women
- How to respond to respiratory infections
- How to treat diarrhoeal diseases

These volunteers become the first line of care in many communities.

## Bridging the gap between communities and health facilities

For many years, the distance between communities and clinics has been one of our greatest challenges, requiring creative problem solving to tackle it.

One of our key partners has been Transaid through its Mobilising Access to Maternal Health Services in Zambia (MAMaZ) and MAMaZ Against Malaria programmes. During these programmes, it introduced something to bridge the gap between the community and health facility: the bicycle ambulance.



At first glance it is a simple idea. Consisting of a bicycle attached to a trailer, it can safely carry a patient over all of Serenje's terrain. These ambulances are operated by Emergency Transport System (ETS) riders who are trained on how to manoeuvre through the terrain and how to safely lift patients.

Two bicycles are typically involved: the ambulance bicycle and a second bicycle called the sweeper. As distances can be very long, sometimes up to 30 kilometres, the riders can switch roles along the journey if one becomes tired.

When a community health volunteer has recognised that a child or pregnant woman is seriously ill, the bicycle ambulance can be mobilised quickly. Instead of walking long distances, patients can be transported safely and much faster.

Once a bicycle ambulance is stationed in a community, a community understands its needs, and they take care of the bicycle and each other.

## Buying time for children with severe malaria

Severe malaria progresses quickly, especially in young children. A child can deteriorate within hours, and if treatment is delayed, the outcome can be tragic.

In the past, this was one of the most difficult situations for families in Serenje. A community might recognise that a child was very sick, but the nearest clinic could be many kilometres away. By the time the child reached the facility, it was sometimes too late. This is why, in addition to the implementation of bicycle ambulances, the introduction of rectal artesunate (RAS) has been so important.

In 2023, the World Health Organisation published a field guide on treating young children with suspected severe malaria with RAS, an effective pre-referral treatment for severe malaria that can substantially reduce the risk of death and disability among young children.

Community health volunteers are trained to recognise the danger signs of severe malaria symptoms in young children, such as a high temperature, extreme weakness, fitting, persistent vomiting, and an inability to drink or be breastfed. When these signs appear and malaria is suspected, the community health volunteer is also trained to administer RAS in the community before the journey to the health facility. This intervention is critical because it buys time.

RAS begins working quickly against the malaria parasite and has a half-life of around 12 hours. This means the child receives life-saving treatment while arrangements are made to transport them to a health facility.



Malaria treatments, including rectal artesunate (left)

Once the medicine has been administered, the community health volunteer activates the next step of the system. They alert the ETS rider, who transports the child to the nearest clinic, where health workers continue treatment. When Transaid and partners piloted this community-based approach in Serenje and Chitambo districts, there was a staggering 90% reduction in deaths in children with severe malaria.

Without the volunteer recognising severe malaria, administering RAS, and triggering the transport system, many of these children might never reach the facility in time. In this way, community health volunteers and ETS riders act as the critical link between the household and the health facility.



CHV training in chitambo district, Zambia

## The power of partnerships

I see the future of healthcare in Serenje as very bright and fruitful, thanks to the partnerships that we've made.

Looking back at the theme of World Malaria Day 2025, which was 'Reinvest, reimagine, reignite', we've seen continued investment into the bicycle ambulances, a reimaged approach with RAS, and with the zeal that our teams have, a lot of ignition.

**We of course have stumbling blocks, such as a challenging funding landscape, but when we have so many helping hands that are willing to play a part, then the future is bright.**