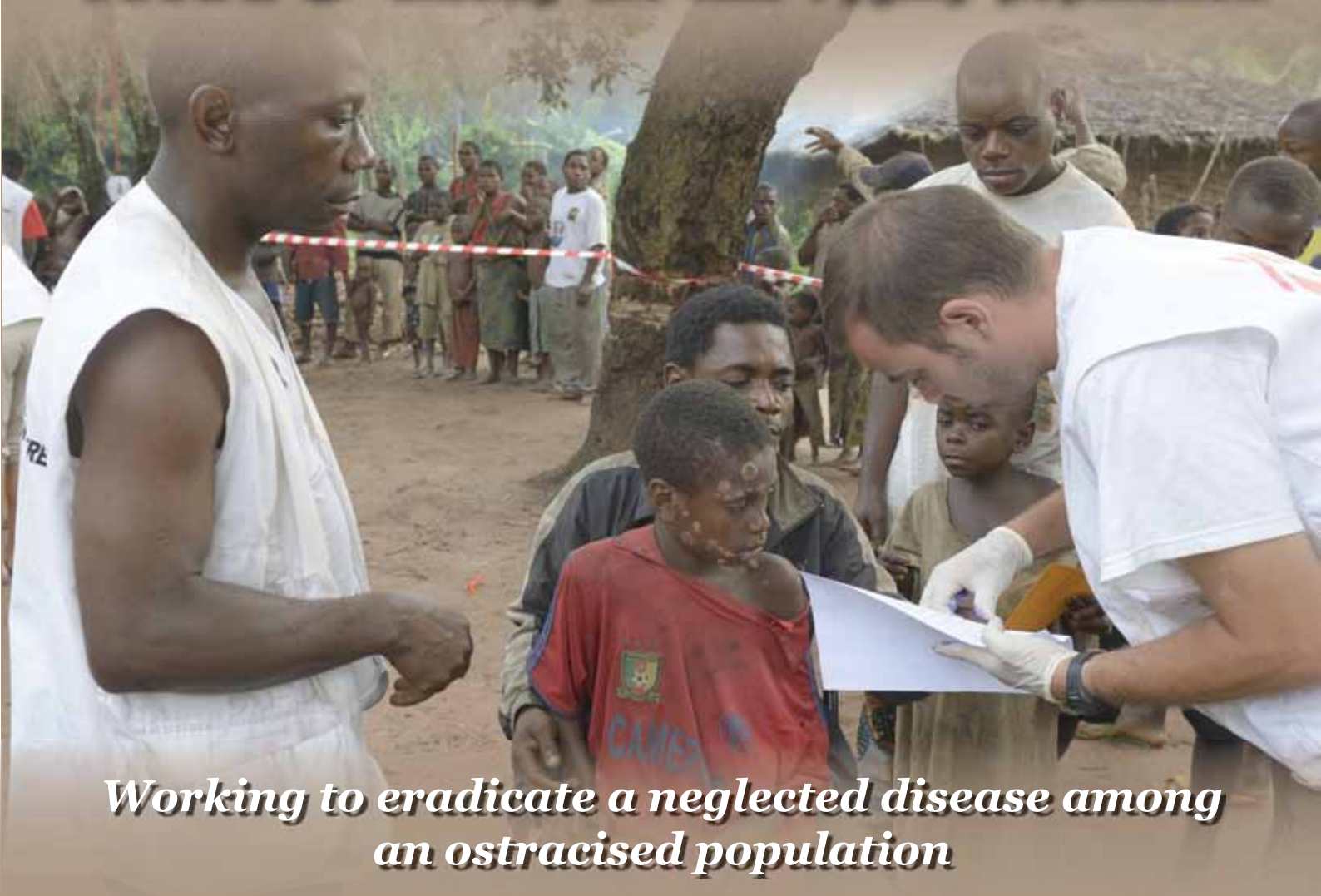




# **YAWS** Campaign for the mass treatment among the Aka Pygmy population



*Working to eradicate a neglected disease among  
an ostracised population*

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**NORTH-EASTERN REPUBLIC OF THE CONGO  
BETOU AND ENYELLE DISTRICTS**

# A mass treatment campaign for yaws among the Aka Pygmy population in northern Congo



**T**he Aka Pygmy communities living in the northern Congo have been ostracised in their home country for many years. They also have almost no access to healthcare and, as a result, are still affected by a neglected disease: **yaws**.

Yaws is a chronic bacterial infection characterised by highly contagious skin lesions. It ravaged Africa during the 1950s and the mass treatment campaigns that followed never managed to eradicate it completely. The disease persists in certain inter-tropical zones. Without treatment, it can attack bones, cartilage and joints and cause permanent disfigurement.

Médecins Sans Frontières came across this disease while carrying out medical consultations in the district of Bétou and decided to track down these Aka communities and treat them in their home environment: the heart of the forest. In line with the latest World Health Organization (WHO) recommendations for eradicating the disease, MSF's teams used one easy-to-administer antibiotic: a single oral dose of **azithromycin** is all it takes to cure yaws. As latent forms of the disease persist, they adopted a universal treatment strategy, in other words, they treated the whole population. **This MSF campaign was the first ever to use this treatment.**





During the first month of the campaign, in September, three separate teams of ten or so people visited the isolated villages along the river Oubangui and in the tropical forest to try and assess the size of the targeted population. Reaching the Aka was a real logistical challenge for the MSF teams, who travelled by foot, in pirogues or in 4x4 vehicles: the aim was to reach 20,000 people scattered across a hundred or so villages.



The campaign was run in two stages. In September, 14,500 people were treated, including 6700 children. An epidemiological study was carried out during the treatment campaign. Among the 6200 children screened, the global prevalence rate of active yaws reached 2.9% on average up to 10% in the most isolated zones. The second phase of the campaign, in October, the MSF teams returned to the sites with the highest prevalence<sup>1</sup> rates to observe the effectiveness of the treatment and treat anyone who had not been seen the first time round. They also took the opportunity to provide basic care (treatment for malaria and intestinal parasites and the cleaning of wounds) and vaccinate children against measles.

A total of 17,440 people were treated for yaws during the two months of the campaign.

**The results of this campaign and of the epidemiological survey will be shared with the local authorities in Congo, as well as with WHO and all the actors who could help eradicate this disease.**

<sup>1</sup> Prevalence is the number of cases of a specific disease present in a given population. Here, prevalence is calculated according to the number of confirmed cases of active yaws among the total number of clinically-tested children under the age of 15.

# Yaws, a neglected disease affecting a forgotten population



Yaws is a tropical disease caused by the treponema bacterium, *treponema pallidum pertenue*. A non-venereal chronic infection, yaws is not life-threatening. It can however lead to permanent disfigurement and disability as it affects the bones, joints and cartilages, as well as chronic infections. Yaws is also known as pian or frambesia.

**Yaws is transmitted through direct skin contact with an infected person.** It affects both men and women, and mainly children under 15 years old.

## *Yaws, a cousin to syphilis.*

Treponematoses is a term used to describe the diseases caused by the bacterial species *treponema pallidum*. Other, better known treponemal diseases include: venereal syphilis (*T. pallidum pallidum*); endemic non-venereal syphilis or «bejel» (*T. pallidum endemicum*), limited to desert regions; and pinta, also known as «mal del pinto» or «caraté», caused by *T. pallidum carateum*, affecting children in central or south America and characterised by skin lesions.

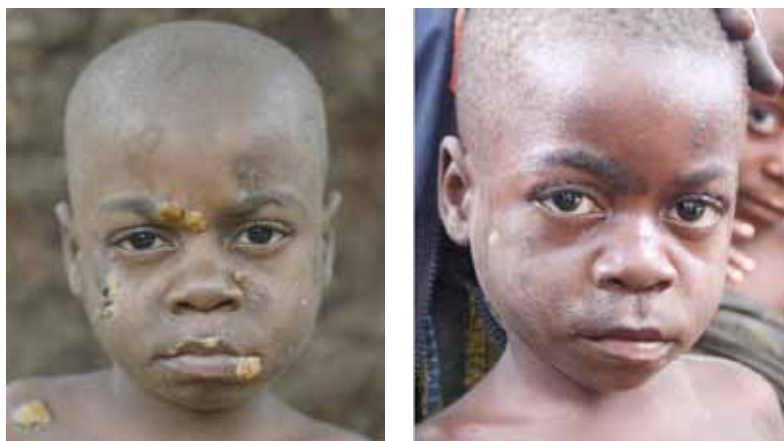
## **From the utopia of eradication to neglected disease**

**Yaws** is a disease that ravaged the African continent until the 1950s, infecting between 50 to 100 million people a year. Between the '50s and '60s, mass treatment campaigns were carried out in 46 countries using a single intramuscular injection of benzathine-benzylpenicillin. These campaigns led to a 95% reduction of worldwide prevalence and completely eradicated the disease in some countries. But over time, surveillance and monitoring lost momentum, national programmes were abandoned and, in many places,

the disease got neglected. As a result, cases of yaws are still being detected in many poor communities in tropical, hot and humid regions of Africa, Asia, Latin America and the western Pacific. The Republic of the Congo is among the countries to be affected. WHO's last assessment of the worldwide prevalence of endemic treponemal diseases was made in 1995 and estimated 2.5 million cases (most of them yaws).



*As human beings are the only reservoir of infection, by treating the existing cases, we can eliminate yaws and eventually eradicate it completely.*



*After three weeks, Yaws lesions have almost disappeared.*

## **New hopes of eradicating the disease by 2020**

A recent clinical trial conducted in Papua New Guinea has shown the efficiency of a single, oral dose of azithromycin for treating yaws. Contrary to the intramuscular benzathine-benzylpenicillin vaccine, which is also painful, **azithromycin is easy to administer and transport.**

WHO has therefore announced a new strategy for eradicating the disease by 2020: the launch of universal azithromycin treatment campaigns in all affected communities. **These campaigns will involve treating all the members of these communities, including asymptomatic cases,** and then seeing the same people again one month later to check whether the antibiotic has worked.

## **Situation in the Republic of the Congo**

In the Congo, sporadic campaigns were run in the Likouala region between 1983 and 2009 to identify cases and administer treatments. The only cases detected were among the region's Aka Pygmy population.

# Why an MSF campaign ?



## **MSF in Likouala: some background**

MSF has been running emergency operations in north-eastern Congo's Likouala region since late October 2009 when thousands of people, fleeing the fighting in the Equator province of neighbouring Democratic Republic of Congo (DRC), began crossing the river Oubangui to seek refuge here.

In just nine months, the size of Likouala's population doubled. According to the High Commission of Refugees, there were an estimated 114,722 refugees in the region in May 2010, spread over several hundred kilometres. Over half had settled along the banks of the river Oubangui.

To ensure access to healthcare for the people (refugees and local) living along the river, MSF organised consultations on a number of displaced persons sites between Mougoumba in the Central African Republic and Impfondo in the Congo. On each site, MSF provided general medical consultations, pregnancy monitoring and severe malnutrition care, as well as access to drinking water.

MSF also supported Bétou hospital, a 80-bed facility offering paediatric care, internal medicine, emergency treatment, maternity care and other services.

## **Encountering the first cases of yaws**

In the course of village consultations (mobile clinics) in the Bétou district, MSF teams regularly came across cases of yaws among the handful of Aka people who attended. In 2011, 167 cases were reported in Bétou district, 80 of which were treated by Médecins Sans Frontières.

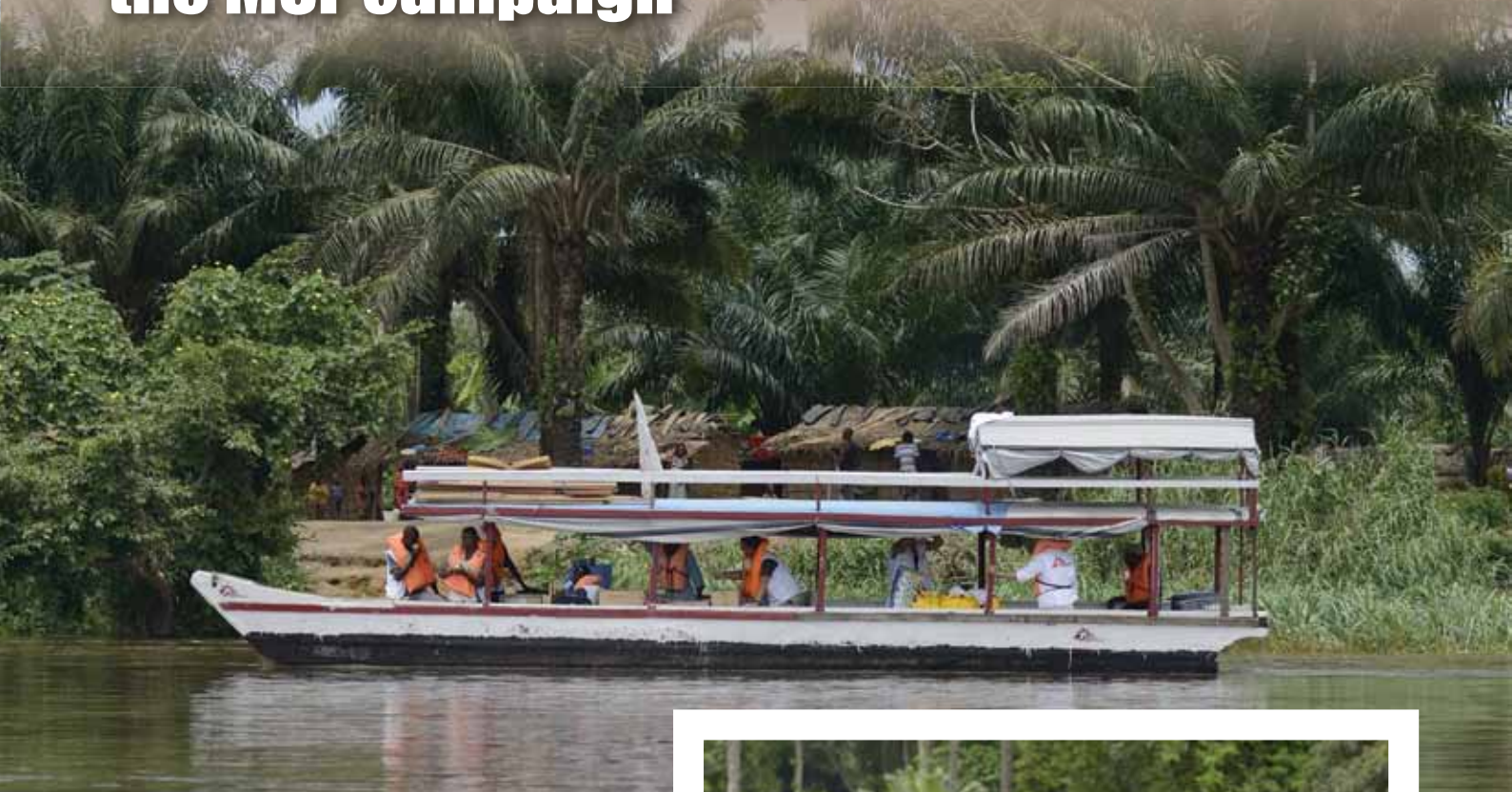
Given the predominance of yaws cases among the Aka and their lack of access to healthcare, Médecins Sans Frontières commissioned Epicentre to conduct an epidemiological study to document the prevalence of this totally forgotten disease among the indigenous population. It was decided to conduct this study and

combine it with a mass treatment campaign for yaws which would follow the new World Health Organization guidelines recommending the use of a new protocol: a single dose of orally-administered azithromycin.



*MSF's campaign was the first to use this new treatment protocol and treated over 17,440 people.*

# Conducting the MSF campaign



## First step: identifying and informing the target population

This atypical MSF mission took several months to prepare. The first step involved heading out to Aka territory to inform people about the campaign and count the villages. It was difficult to get an accurate idea of the size of the target population as the Aka are nomadic, and so by definition hard to count, especially in the most remote regions.



*“ We started by exploring the roads and villages to estimate the number of people and get as accurate an idea as possible of the size of the target population. We took the opportunity to raise awareness about the campaign in villages that sometimes took several days to reach. But we did get a rough mapping of the area. ”*

Matthew Coldiron,  
doctor-epidemiologist, leading the prevalence study.



The mapping gave us an estimated target population for the entire river and road network of some 20,000 Aka people.

## A medical challenge...

During four weeks in September, three separate teams of around ten people, composed with of national staff (awareness-raiser, driver, nurse, translator, porter) and international staff (doctor, nurse, logistician), worked their way through the tropical forest and along the Oubangui river in an attempt to treat yaws.

It took around twenty days to screen and treat **20,000 people scattered over hundreds of villages**. From dawn to dusk, the teams moved from one place to another, each time setting up and taking down the consultation site. The place was relentless, the timing was tight. On average, there were between 250 and 500 consultations a day.

Everybody had to be treated - adults just like children. All children presenting skin lesions were screened with a test usually reserved for *treponema pallidum* syphilis (the same bacterial family as yaws). A drop of blood from a fingertip, once mixed with a reagent, produced a result within minutes and was carefully noted to be use in the prevalence study.

In addition to the yaws campaign, the teams held more than 1,200 general consultations to treat diseases such as malaria and intestinal parasites (systematic treatment for children) and vaccinated nearly 4000 children aged between 6 months and 5 years for measles.



“

*The awareness-raisers really got their message across. It's now half past nine, and we've been up since 4, so it's taken us 5 and a half hours to see 250 people and catch up with those we didn't get to see yesterday. ”*

Axelle, infirmière.



### **... and a logistics feat**

In addition to the logistics needed for carrying out the medical consultations, the teams had to be equipped for 13 consecutive days of total autonomy in the heart of the forest. Their living conditions were basic - tents, just enough water... They had to travel as lightly as possible as all the material had to be transported from one site to another by car, pirogue or on foot. Things were further complicated by the fact that it was the rainy season – as this is the only time of year that the Aka stay put.



“

*When I visited this site it was the dry season. We came to do a pre-headcount and told people about the campaign. It was far easier to get here, the river was lower. Today we spent fifteen minutes in a pirogue, followed by a two-hour walk through swamps with water up to our waists, then another hour of walking on dry ground. ”*

Matthew Coldiron,  
doctor-epidemiologist leading  
the yaws project for Epicentre.

The second part of the campaign was conducted in October and involved two teams returning to the sites with the highest yaws prevalence to check whether the treatment had worked and treat any people not seen the first time round.

# Epicentre's epidemiological study



Epicentre's study had a dual objective: first, to estimate the prevalence of active yaws among children under 15 year of the population treated during the mass yaws treatment campaign, and second, to identify locations with a high prevalence of the disease in order to scale up surveillance and the active detection of cases after the campaign. The study concentrated on the districts of **Bétou** and **Enyellé** in the department of Likouala and covered the Aka population aged between 6 months and 15 years old.

## Methodology

Every child under 15 years old present during the yaws treatment consultations was screened for active (visible) yaws, firstly through listening to the mother then with a clinical examination. Where there was a clinical suspicion of yaws, the children were given a rapid treponema bacterium detection test.

## Preliminary results and initial recommendations

**A total of 17,440 people were treated during this two-month campaign.**

Among the 6,215 children screened in the first round, there was a clinical suspicion of yaws in 485 cases, and 480 children were tested with a rapid test, with parental consent. A total of 183 cases of yaws were confirmed. Global prevalence was 2.9%, 2% in Bétou district and 3.8% in Enyellé district. **The worst-affected villages were concentrated in two remote areas of Enyellé district, where local prevalence was over 10%.**

**6728** children < 15 years **treated**

5730 children < 15 years  
without signs of active yaws

**6215** children < 15 years **diagnosed**

**485** children < 15 years with **suspicion of active yaws**

5 refused  
the confirmatory test

**480 tests**

183 positive  
296 negative  
1 unknown

**Yaws is still a real health problem for the Aka community in Likouala, especially in Enyellé district** where it looks like a second treatment campaign will be necessary in the coming months. In the district of Bétou, given the good coverage of the campaign and the low prevalence, efforts over the next few months should concentrate on surveillance and the systematic treatment of all members of any families in which cases occur.

The predominance of cases seen among boys (60%, when there is normally a 50/50 gender distribution) suggests unknown additional risk factors.

## What next?

The purpose of the campaign and epidemiological study is to share the experience and encourage other actors to implement the World Health Organization's new recommendations for eradicating the disease. The work to be done will be shared with the Congolese local authorities, the World Health Organization and any other actors able to join the fight against this disease.

**“** *We are the first to have implemented this new strategy. The idea now is to communicate on our experience with this disease and this new treatment, and on the means required to reach these isolated population in the forest. We hope that others will follow in our footsteps, because yaws is present in other countries too.* **”**

Matthew Coldiron, doctor-epidemiologist.

# The Aka Pygmies of the northern Congo: a threatened and exploited people



The Aka live in the north of the Congo and the south of the Central African Republic. Hardened forest dwellers, they are hunter-gatherers. The forest is their home; it protects them, feeds them and cares for them. Traditionally nomadic, the Aka move around the forest with the changing seasons, heading where there is food to be found (game, honey, nuts, berries, grubs, roots, plants, etc.) Living as one with nature, they have an ancestral knowledge of the forest's fauna and flora.

Yet today the Aka are under threat. They tend to settle close to the agricultural land of their Bantu neighbours who see them as cheap labour. In the region of Likouala it is not rare to find villages with a sedentary Aka community. Yet despite their efforts to cohabitate with their Bantu neighbours, they are still being ostracised and exploited. The law on the promotion and protection of the rights of «indigenous»<sup>2</sup> populations, adopted in 2010 and officially promulgated by the President of the Republic of the Congo, Denis Sassou Nguesso, in February 2011, still hasn't been brought into effect.



As time passes, the Aka's self-sufficient lifestyle is threatened. They live in extreme poverty, totally marginalised. Intensive forest exploitation, large scale agriculture and commercial development have forced them to abandon their traditional territory and the tiny stretches of land they occupied. Some groups have chosen to retreat further into the forest to escape the influence of their neighbours.

<sup>2</sup> The law uses the term "indigenous" rather than "pygmy".

## These minority groups have virtually no access to healthcare

Where they have become sedentary, the Aka have access to the handful of existing health facilities, so the MSF teams working in Bétou hospital and the surrounding health centres come across them regularly in consultations. But only a minority come to the health centres.



Their isolation and lifestyle are not the only explanation for their lack of access to health facilities. Although it is true that they live in very isolated areas, it is also true that they do not receive the same attention as other populations, or other regions. Why do diseases such as yaws and leprosy still exist among these people when they have disappeared among other population groups? Because they have virtually no access to treatment.

In their report, G. Salmone<sup>3</sup> and F.Taglioni explain that «mappings of the prevalence of certain endemics such as yaws often correspond to the territories of marginalised ethnic groups. Yaws is a medical indicator of discrimination».

# Conclusion



The chronicity and incidence of yaws among the Aka Pygmy population are known facts, but the human and logistical resources needed to treat the disease are such that they require the participation of the whole national health system and its partners.

**An eradication strategy, a surveillance network and clinical care provision need to be put in place to eradicate this disease altogether from among the Aka.** But this won't happen without considerable political commitment on the part of the Congolese authorities and, more generally, of the international funding agencies who so far have remained indifferent to this disease.

**“ We are the first to have implemented this new strategy. The idea now is to communicate on our experience with this disease and this new treatment, and on the means required to reach these people isolated in the forest. We hope that others will follow in our footsteps, because yaws is present in other countries too. ”**

**Matthew Coldiron, doctor-epidemiologist.**