



Annual Report **2019**

Doctors *for* Madagascar

Dear friends, supporters and donors of Doctors for Madagascar

Madagascar is a country of outstanding beauty, with rainforest and tropical beaches, endemic flora and fauna, and friendly and open people. But this beauty stands in stark contrast to its widespread poverty and other challenges, which hinder the country's economic development.

In particular the south of the island, where our organisation has been active for almost ten years, suffers from cyclones, droughts and pests. Diseases like tuberculosis, measles and even the plague spread easily. During the measles epidemic in the last year, with 98,000 infections and over a thousand deaths, our teams supported health centres and immunisation campaigns with logistics, transport and skilled workers. This was only possible thanks to the preparedness and commitment of our local staff.

Our team on the ground consists of more than 50 employees in four regions of the country, among them midwives and doctors, lab technicians, logistics specialists, engineers and drivers; as well as around a hundred community health workers who are active across the many small and larger villages in our area of work. They ensure that the needy can access high-quality and affordable healthcare, and educate the population on topics relevant to health. Our team in Germany has grown too, ranging from doctors and epidemiologists, software developers and process optimisers to social scientists and is furthermore sustained by committed volunteers.

Thanks to this broad staff structure, we have been able to consolidate and extend projects like »mTOMADY« over the past year, supported by the *Else Kröner-Fresenius-Stiftung*. Pregnant women can save money for the costs of the birth in an electronic health savings wallet – conveniently on their mobile phone. The successful roll-out of this project was rewarded: mTOMADY won the »New Ideas for Global Health« competition from the *Global Health Hub Germany*.

Another highlight of the past year: our tuberculosis project is growing further, thanks to the »Initiative Hospital Partnerships« of the *German Development Agency (GIZ)* and the *Nord-Süd-Brücken* Foundation. Now there are eight mobile diagnostic and treatment centres »in the bush«, as well as a referral system for patients with multi-drug-resistant tuberculosis.

You'll hear more about these projects and many others over the next few pages. Follow us to Madagascar!



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mTOMADY – an electronic health savings wallet to protect people from medical impoverishment

Without money, there is no treatment. In Madagascar this is unfortunately often the case, since only very few people have health insurance. Around 70% of the Madagascan population have to live with the risk of financial ruin because of medical costs. This puts many people off seeing a doctor. In addition, hardly anyone has a bank account in which to put aside money for possible costs. And there are further significant hurdles for patients: non-transparent

pricing and a lack of infrastructure all restrict access to medical treatment.

In the last few years, the number of mobile phone users in Madagascar has massively increased. Many people now use their phones to make payments for doctors' appointments or hospital bills, through a system known as »mobile money«. This is where our project, mTOMADY (or »healthy« in Malagasy) comes into play: the electronic health savings wallet is a software solution which offers its users

a safe and transparent way to settle bills for health services via their mobile phones.

The electronic health savings wallet has been available in the capital, Antananarivo, since 2018, and helps pregnant women to save money for the costs of giving birth. These savings can only be used to pay for healthcare. In the health centre or reference clinic, women can log in with their SIM-cards: they don't need a phone of their own or internet access. The invoice is checked and validated, and the

money is sent to the medical facility.

The system also ensures quality: to use the electronic health savings wallet, clinics must be certified according to medical standards.

This project has been made possible by the generous support of the *Else Kröner-Fresenius-Stiftung* and a successful collaboration with the *Berlin Institute of Health* and *ThoughtWorks* Germany. Thank you!

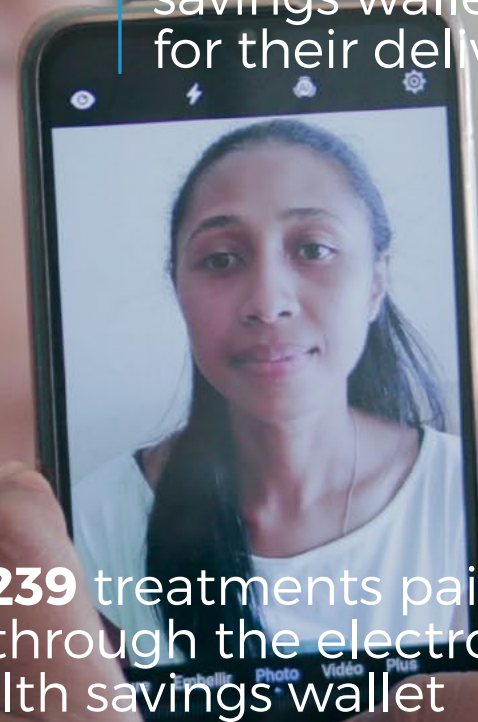
29 partnering health centres



“ We can submit bills, pass on medical information and receive our payments - all on mTOMADY. This saves us a lot of time and effort that we can use to better care for patients. ”

An employee of a health centre in Antananarivo

2,743 pregnant women use the electronic health savings wallet to prepare for their delivery



30,239 treatments paid for through the electronic health savings wallet

5,905 calls to our tollfree helpline on pregnancy, childbirth, and financial protection

When first signing up for the health wallet, members need to be photographed, so they can prove their identity later.

“ I pay money into my electronic health savings account at a nearby agent. My family and friends are also supporting me, so that I can afford the treatment I need. I am reassured that the money is safe and available when I need it, and that the hospital can't cheat me with excessive bills. ”

A pregnant woman in Antananarivo





Experiences with the mTOMADY electronic health savings wallet

When the mTOMADY team appeared in our clinic one day, my first thought was: Not another project that brings us nothing but more work! I had simply seen so many projects come and go, that did not bring any lasting benefit. But my opinion changed quickly when I realised how simply the system worked. And as women started to come from the health centres into our clinic to give birth, I would help them to use their health savings wallets.

The great thing is that the health savings wallet has big advantages both for the pregnant women, as well as for our clinic. In the past we were always having to deal with a large number of patients failing to pay their bills – especially for unexpected and expensive treatments like C-sections. After the introduction of mTOMADY, the clinic management could see in just a few months that the number of defaults had significantly dropped. Even the head doctor of the clinic, Prof. Hery Rakotovao, emphasised the importance of mTOMADY, and asked all staff to encourage every pregnant woman to use the health savings wallet. Prof. Rakotovao named me as the mTOMADY representative for all the doctors, midwives and pregnant women in our clinic. Since then, working with the health savings wallet has been part of my regular duties. It makes me very proud!

Eldin Razafitiana, Administrator



Eldin Razafitiana is an administrator at the clinic »Centre Hospitalier Universitaire de Gynécologie-Obstétrique de Befelatanana« in Antananarivo.

◀ *A great-grandmother with a newborn in front of the clinic.*

Safely through pregnancy

For four years now, we have been working to reduce the high maternal and child mortality rates in Madagascar - with success!

All the most common causes of maternal and child deaths can be diagnosed through antenatal check-ups, and either treated or avoided through proactive family planning, qualified birth assistance or caesarian sections. Every woman and every man should know about this! That's where we come in: we explain in detail about how to prevent complications and how to recognise warning signs during pregnancy, working with many community health workers in more than a hundred villages in four regions of the country. We make sure that the health centres have adequate equipment and medication, and train midwives and doctors in hands-on courses. In

order to diagnose pregnancy complications early, teams carry out antenatal ultrasounds with a mobile machine even in remote villages. And in case of emergency, off-road ambulances are stationed in four bases to bring women and newborns to the nearest clinics.

In Ejeda, one of these locations, there was an unusual gig last year: Ebera, a local singer and guitarist composed a song which he performed in the marketplace. The message: safely through pregnancy.

All these activities would not be possible without the generous support of the *Else Kröner-Fresenius-Stiftung* and the *ALTERNAID Foundation*. We are deeply grateful for this.

365 awareness-raising campaigns / focus groups

144 family-planning information events

65,949 antenatal check-ups

23,807 women participating in the awareness-raising campaigns/focus-groups



103 community health workers in service

9,772 safe births

61 newborns treated (less than one month old)

7 reference hospitals

31 partnering health centres (the ambulances are available to a further 12 health centres in case of emergency)

1,264 treatments for serious pregnancy complications

501 emergency evacuations in the ambulance

Scientific project evaluation

A community health worker is being interviewed in Antananarivo.

We have a growing interest in studying the approaches and challenges of our projects scientifically. Over the past year, four PhD-students, including two from Madagascar, have been working on questions such as:

Is the electronic health wallet being accepted by pregnant women and hospitals?

To gather answers, seven interviewers spread out across the confusing metropolis of Antananarivo, in spite of the rainy season, to track down participants who had been randomly selected beforehand. Quite a challenge in a country where people don't have fixed addresses!

Thanks to their untiring efforts, they managed to interview more than 400 people to find out if the health wallet is being understood and accepted. What benefits does it bring? What could be improved? How has the health and savings behaviour of pregnant women changed? And who actually uses the health wallet? The results of these interviews help us tailor the project activities to the needs of all participants.

How satisfied are the patients with the medical care in the rural health centres?

Patient satisfaction is also the goal of the project »Vohoka Ieren Doza - Safely through

pregnancy« (see p. 10–13) in the south of the country. Our interviewers asked 1,180 women about their experiences with the health system. This way, we can make sure that even »in the bush« problems with pregnancy care do not go unreported and that approaches can be developed and applied to improve the quality of care.

Our team received technical support from the *Institute for Global Health* of the University of Heidelberg and the *Charité University Hospital Berlin* - Thank you to everyone involved!

Do you remember our last annual report? Just before the start of the health wallet mTOMADY at the end of 2017, more than 400 pregnant women and 20 health experts in Madagascar were asked about their opinions on and experience with mobile payment systems in the health sector. In 2019 we were able to publish the second part of the results. Curious? You can read about it here:

doi.org/10.1371/journal.pone.0228017

»Saving Lives« – protecting people from destitution

Since there is no comprehensive medical insurance available in southern Madagascar, many people only visit a clinic in extreme emergencies. People fear being financially ruined by the costs of treatment, because patients are frequently forced to borrow money or sell cattle and land to meet the cost of their hospital bills. Because of this, whole families who are already living in poverty are impoverished further.

In order to prevent this vicious cycle, the »Saving Lives« project was started five years

ago in the clinic of Manambaro. The project finances the treatment of seriously ill patients who are not in a position to pay for their own treatment. The level of support is decided case-by-case according to the income and property situation of the patient's household.

Since the project was set up, hundreds of patients have been helped, thanks to the generous support of the *Ein Zehntel* («One Tenth») Foundation and many private donors who have contributed to the Saving Lives Fund.

61 patients this year had their treatment costs partly or wholly paid

A ward in the clinic of Manambaro: the patients' relatives provide food and company to their loved ones during their stay.

28 women
12 men
21 children

33 patients had surgical treatment

A girl from Mandiso

A seven-year-old girl in the village of Mandiso, in the south-east of Madagascar. Her name: Kristy.

She lives in a clay house with a roof of corrugated iron. The house is just one small room, with a floor made of compacted clay. Kristy's mother cooks food for the family in a big aluminium pot over an open fire in front of the door. A pair of scrawny chickens belonging to the family run here and there, and there is also a small patch of land outside the village, where they grow rice and cassava. The harvest is hardly lavish, but it is just enough to feed the family. If a tiny portion of the harvest is left over, her parents can sell it on the local market.



In the past year, Kristy's mother had to have an operation for an ectopic pregnancy in the clinic at Fort Dauphin. The surgery went well and the patient recovered quickly. The cost of treatment, however, came to around 20 times the family's monthly income. Without the financial support of friends, neighbours and other family members, Kristy's parents would not have been able to pay the bill.

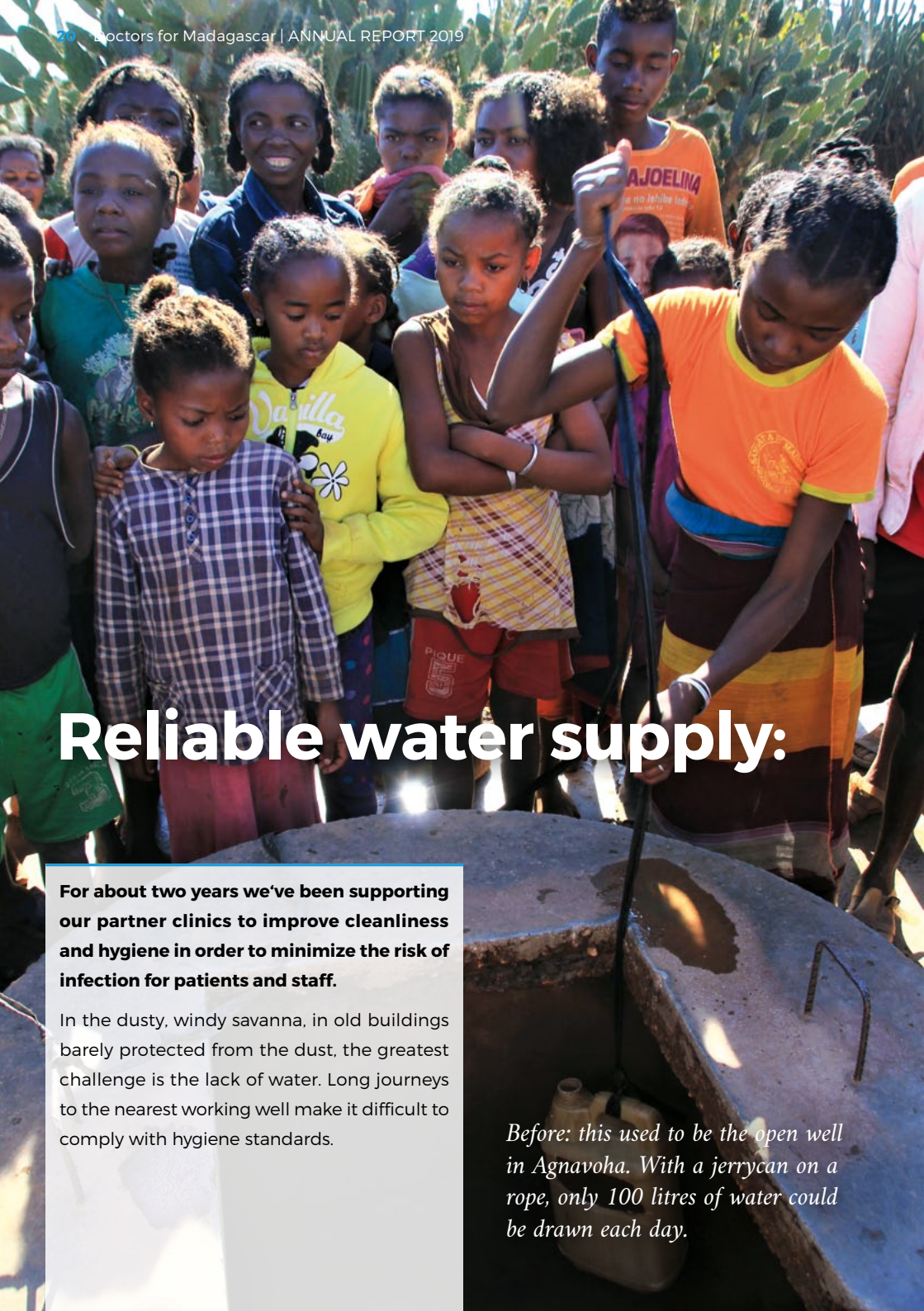
Just a few months later came a second blow. Kristy developed a high fever. She was lethargic and exhausted. When her condition worsened, her parents brought her into the local health centre. The nurse on duty recommended that they should go to the clinic in Manambaro, one of the partner hospitals of Doctors for Madagascar. Without the means to hire a bike or an oxcart, the parents spent Christmas Day carrying the girl the 30 km long journey to Manambaro in the scorching heat. Dr. Mireille diagnosed the visibly weakened child with a case of malaria, which had caused pneumonia. She was immediately started on a course of treatment through an IV infusion, and her life was saved.

The costs of this treatment were fully covered by Doctors for Madagascar. This was a great help to the family, as they will still be paying off the debts incurred by Kristy's mother's operation for a long time yet.



The village of Mandiso is situated in green rolling hills, but poverty is severe.

◀ *Kristy (right) with a friend.*

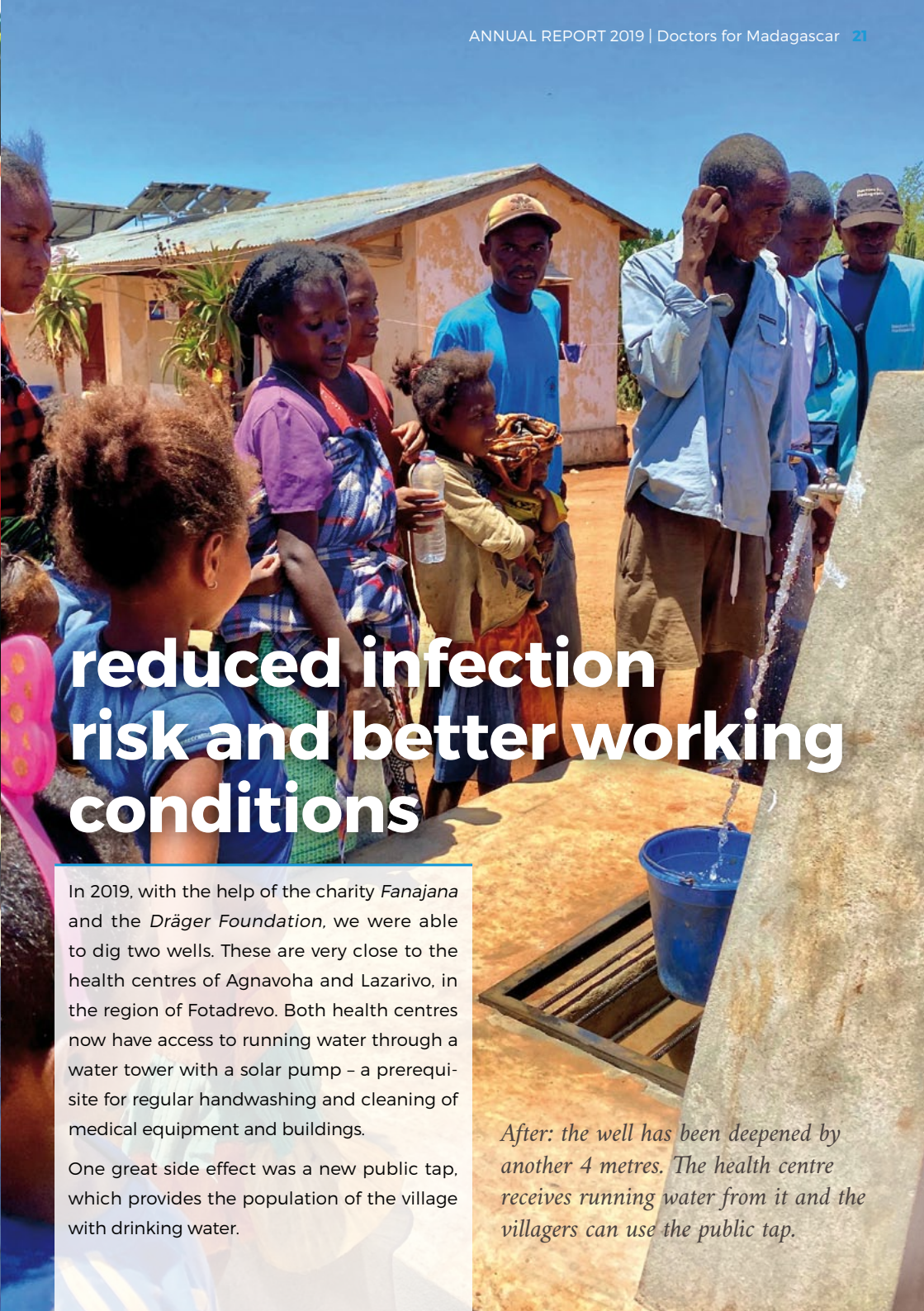


Reliable water supply:

For about two years we've been supporting our partner clinics to improve cleanliness and hygiene in order to minimize the risk of infection for patients and staff.

In the dusty, windy savanna, in old buildings barely protected from the dust, the greatest challenge is the lack of water. Long journeys to the nearest working well make it difficult to comply with hygiene standards.

Before: this used to be the open well in Agnavoha. With a jerrycan on a rope, only 100 litres of water could be drawn each day.



reduced infection risk and better working conditions

In 2019, with the help of the charity *Fanajana* and the *Dräger Foundation*, we were able to dig two wells. These are very close to the health centres of Agnavoha and Lazarivo, in the region of Fotadrevo. Both health centres now have access to running water through a water tower with a solar pump – a prerequisite for regular handwashing and cleaning of medical equipment and buildings.

One great side effect was a new public tap, which provides the population of the village with drinking water.

After: the well has been deepened by another 4 metres. The health centre receives running water from it and the villagers can use the public tap.

An X-ray department in the bush

»What's this room?«, I ask Dr. Justin, surgeon and head doctor of the clinic of Ejeda. »That's the old X-ray room«, he replies, opening the door. We're hit by a wave of stuffy air. In the room, there stands an obsolete X-ray machine, an examination table and several wooden boxes, all covered in a layer of grey dust, the all-pervading sand of Ejeda. The dust makes it feel like I've been transported to another time.

It's now two years later. Ever since he came to the clinic, a functioning modern X-ray department has been on Dr. Justin's wishlist. In summer 2019, through a project of the »Initiative Hospital Partnerships« of the *German Development Agency (GIZ)* and in cooperation with the American organisation *Global Health Ministries*, we were able to acquire a digital X-ray machine for the clinic. Two members of the clinic staff were trained for 3 months by a Malagasy X-ray assistant to use the new machine.

Now, around 50 patients are examined every month with the new X-ray machine, the only one in a radius of around 150 km. It's a big step forward for Ejeda and for the region – and it's certainly not gathering dust.

Etienne Lacroze, project leader for the »Initiative Hospital Partnerships« project in Ejeda



A patient is being prepared for a chest X-ray.

Further training for medical staff

Further training of medical staff remains one of the pillars of our work. Sound theoretical and practical knowledge and know-how are a vital resource. They build the self-confidence and motivation of our staff and, at the end of the day, are essential preconditions for improved treatment and more reliable diagnoses.

Two examples for further training in 2019:

Lab technician Fabrice Maharavony was able to accompany and train the lab staff of the clinic at Ejeda, thanks to the GIZ project of the »Initiative Hospital Partnerships«. In the beginning the conditions in the lab were deeply

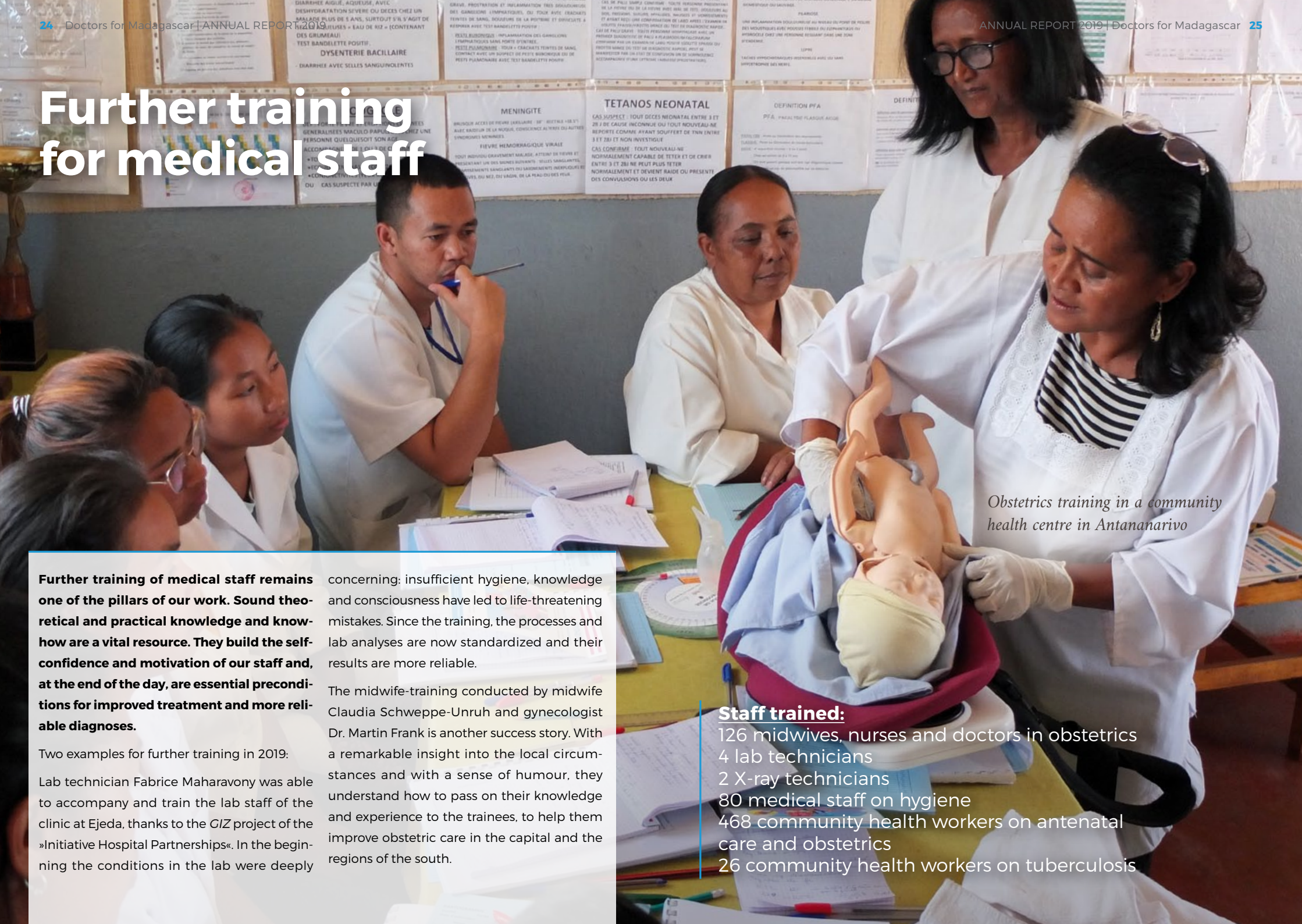
concerning; insufficient hygiene, knowledge and consciousness have led to life-threatening mistakes. Since the training, the processes and lab analyses are now standardized and their results are more reliable.

The midwife-training conducted by midwife Claudia Schweppe-Unruh and gynecologist Dr. Martin Frank is another success story. With a remarkable insight into the local circumstances and with a sense of humour, they understand how to pass on their knowledge and experience to the trainees, to help them improve obstetric care in the capital and the regions of the south.

Staff trained:

- 126 midwives, nurses and doctors in obstetrics
- 4 lab technicians
- 2 X-ray technicians
- 80 medical staff on hygiene
- 468 community health workers on antenatal care and obstetrics
- 26 community health workers on tuberculosis

Obstetrics training in a community health centre in Antananarivo



132 years ago ...

... Robert Koch presented his discovery of the tuberculosis pathogen *Mycobacterium tuberculosis* in Berlin. Despite the significant advances in treatment since then, tuberculosis (TB) remains one of the ten most common causes of death around the world. More than 95% of TB-deaths occur in low- and middle-income countries, including Madagascar.

In 2019, we have been able to expand our support for the fight against TB, transforming our project Tomati to INTUBAA (INtegrative TU-Berculosis care in Atsimo-Andrefana). As before, our goal is to improve the quality of care for TB-patients and to make TB-treatments more accessible in a sustainable manner. Thus, we trained 26 community health workers from villages like Ankilimivory, Amborompotsy and Vohitany on the topic of TB (how to identify suspected cases, how to advise and follow up

with patients) and equipped two TB-teams in Ejeda and Ampanihy with motorbikes, protective equipment and portable diagnostics gear. In the TB-lab at Ejeda, we installed an LED-microscope that makes it easier to score samples and improves the quality of results. In total, 99 mobile missions have been completed with this equipment, reaching eight remote villages and one prison. More than 2,300 people have been tested and several hundred courses of treatment have been started. In addition, many children who had been in contact with TB patients were treated as a precaution, following WHO guidance. Our activities for TB-patients are supported by the *Nord-Süd-Brücken* Foundation and a project of the »Initiative Hospital Partnerships« of the *German Development Agency (GIZ)* - Thank you very much for this support!

These two lab technicians are preparing microscope slides with sputum samples during one of the mobile diagnostics missions. Back in the lab, the samples will be assessed under the microscope to make a diagnosis.

41° in the shade

It's hard to imagine that only a few days ago I was still in the midst of foul Berlin weather. My body is fighting against the omnipresent heat, and I'm instinctively seeking out shade. Today I'm accompanying the Doctors for Madagascar tuberculosis team and the lab technicians from the TB lab in Ampanihy to a mobile clinic in the very remote village of Antaly. While I am still trying to orient myself, my colleagues are setting up tables and equipment.

Then everything moves fast: people of all ages come running from every direction. What stands out particularly is the many older people amongst them - unusual in this country, where the population is so young.

Some are wearing woolen hats or even down jackets, feeling cold, as the debilitating tuberculosis has caused them to lose so much weight. Soon there are over 60 people in the initially empty square. The team explains, takes sputum samples, weighs the patients, asks about any side-effects and gives out new rations of medication. The patients gratefully accept the free treatment. It becomes clear to me: without our partners and us here, TB patients would have little prospect for healing.

Nadine Muller, Project leader on tuberculosis (INTUBAA)



Paulin and Mosa explain the process of taking samples for diagnosis to the patients suspected of having TB.



Thank you.

To all our friends and supporters – without you, none of this could happen, and we would have no stories to tell. This work can only be done because of your great encouragement, commitment, support and ideas – and obviously also your giving. We do our best to use all donations entrusted to us wisely and conscientiously for our goal: to improve medical care and with it, quality of life, for as many people as possible in Madagascar. Please stay on our side in the years to come.

Yours,
For Doctors for Madagascar

Dr. med. Julius Emmrich Amanda Hecktor Etienne Lacroze Nadine Muller

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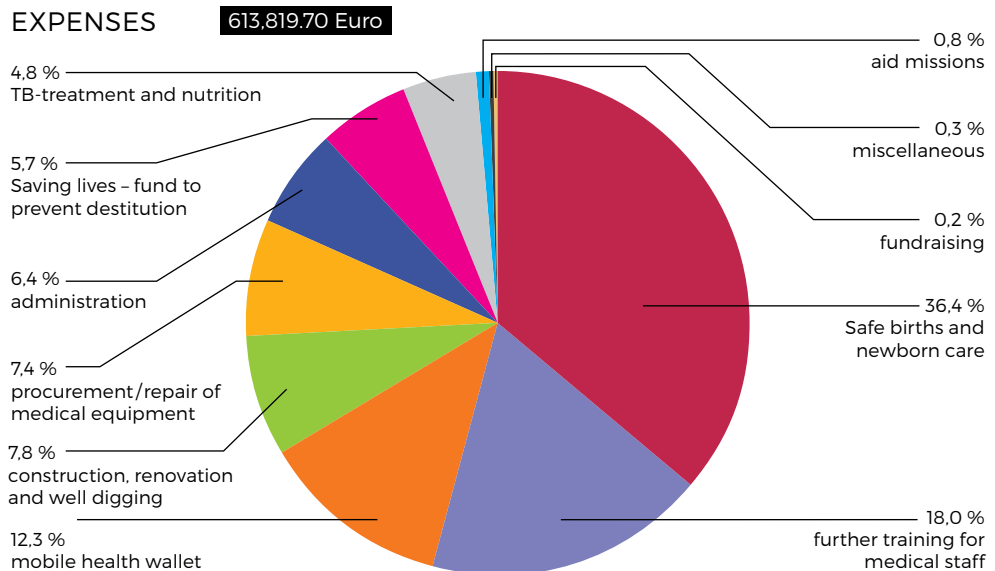
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INCOME Donations/grants in total 651,425.19 Euro



Our team in the south of Madagascar

