

# *Field survey report for the Global South eHealth Observatory*

THE GLOBAL SOUTH



EHEALTH OBSERVATORY



FONDATION PIERRE FABRE

## Meeting with the “ISME-Togo” Project

Togo - April 2020

Julie LANCKRIET, under the supervision of Samir ABDELKRIM  
STARTUPBRICS



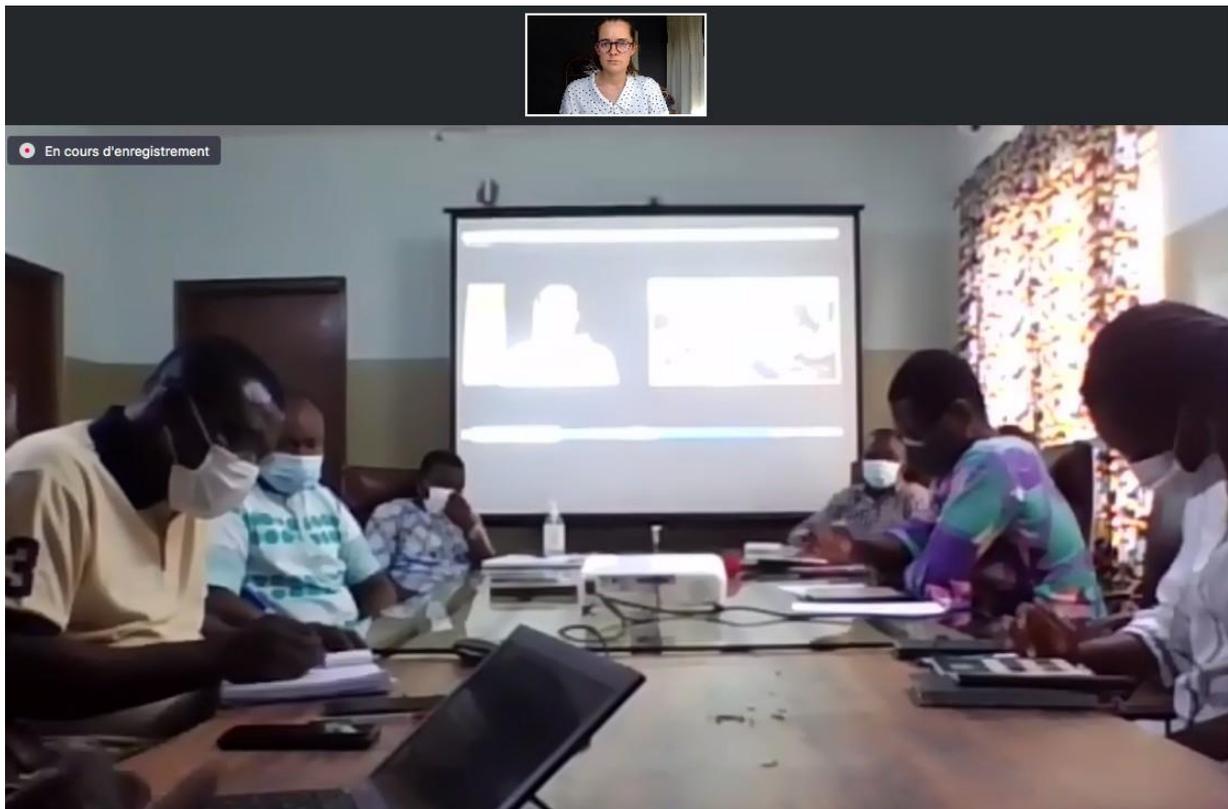
*In the course of his or her daily work, the community health assistant records the health parameters of children under of age of 5 years old. Here: temperature and weight.*

## CONTEXT

The health context of the Covid-19 Coronavirus was made very obvious during our meeting with the ISME-Togo project teams, as everyone was wearing their protective mask for our video conference! However, it was the only team that met in a single room, and not everyone was behind their computer screens at home, since confinement is not in place in Lomé. The population must however, respect a curfew.

The project that will be presented to us by the Koffivi Agbetiafa teams and the Executive Director of ISME-Togo, is very similar to another project audited by StartupBRICS for the Pierre Fabre Foundation: the UpScale application, discovered in Mozambique in April 2019.

As in Mozambique, Togo relies on volunteer community health workers (CHWs), who are not medical staff, to support its rural health system. They provide basic health care at a family and community level, focusing on basic healthcare such as maternal, newborn and child health. They thus act as an interface between the population and the health services, alerting the higher medical level when necessary, and are therefore in the front line in the early stages of health centres.



*Video conference on 10 April 2020 with ISME-Togo and StartupBRICS teams*

At the next levels of the health system, then, there are the peripheral healthcare units, as the basis of the healthcare system and where outreach activities are carried out in a fixed strategy and towards the population, then the district and regional hospitals which respectively make up the first and second baseline, before finally the University Hospital Centres.

The most frequent health problems in Togo are mainly tropical diseases, such as anaemic and neurological malaria for its most severe cases, acute respiratory infections and diarrhoeal diseases. With regard to children, there are also a large number of cases of sickle cell disease.

Looking more specifically at maternal and child health, it appears that most of these frequently encountered health problems are effectively monitored and addressed by community health policies. Indeed, according to the Unicef and Muskoka French Fund analysis report entitled "*Community Health Policies and Programmes in West and Central Africa*" published in 2019, the use of community healthcare and CHWs has gradually become widespread in the sub-region and is now recognised as "an integral part of a promising strategy in the search for increased access to care and treatment for children, thus contributing to improving equity and reducing child mortality".

## HISTORY

It all began six years ago, with the creation of the association "Le Coursier d'Hôpital International Togo" in the field of medical monitoring in 2014. It begins its activities as a partner in medical follow-up care for vulnerable populations, and in particular participates in the emergence of medical facilitators, a new volunteer medical profile that it has created within the health system for the rapid care of pregnant women, children and people with disabilities. An experiment that will be put forward for the ISME-Togo project.

In the course of their work, the Coursier d'Hôpital teams have come to the conclusion that the main bottlenecks in the Togolese health system are in access to care: the distance separating rural communities from their health centres is far too long to encourage them to consult a doctor regularly. Indeed, many peripheral healthcare units are located more than 5km from their beneficiaries, as shown by the figures of the study conducted for the initial phase of the project in 2018 on the volume of target populations (pregnant women and children under 5 years old):

Formation s sanitaires	Pop totale		Population cible FE (4,5%)		Population enfants de moins de 5ans (20%)	
	Effectif	Plus de 5km	Effectif	Plus de 5km	Effectif	Plus de 5km
<b>Akoumapé</b>	26 669	12 192	1 200	549	5 334	2 438
<b>Hahotoé</b>	16 325	6 650	735	299	3 265	1 330
<b>Total</b>	42 994	18 842	1 935	848	8 599	3 768

*Figures recorded by the DokitaEyes project team in 2018 on 2 districts of the Vô prefecture: Akoumapé and Hahotoé*

Mr. Agbetiafa's teams are thus moving towards telemedicine, choosing to develop an application that allows communities to send health information to the Peripheral Health Unit without having to travel: **DokitaEyes**, or "the doctor's eyes". In 2018, the project was spotted by the French Embassy in Togo, which decided to launch a Call for Projects to finance an initial 6-month pilot for €50,000. Won by Le Coursier International, the project is being launched in two of the seven prefectures of the Maritime region, which plans to provide 12 CHWs with the application to monitor pregnant women and children under the age of 5 located more than 5km from a Peripheral Healthcare Unit of Akoumpé and Hahotoé.

*"DokitaEyes makes it possible to reconcile two strategic areas of intervention for France in Togo, which are innovation and support for maternal and child health: it was a great opportunity for us"*

*Maziar Taheri, Cooperation Attaché at the French Embassy in Togo*

At the end of this first experimental phase and in view of the very convincing results of the project, which has enabled 500 pregnant women and more than 1,000 children to receive follow-up care, the Embassy decided to expand it in all seven prefectures of the Maritime region. The Togolese Ministry of Health is now involved in the programme, which this time will be directly steered by the French Ministry of Foreign Affairs, via a governmental agreement. The project will therefore be deployed over two years, with a budget of nearly €700,000 and it will be called ISME-Togo: *"Innovation for the Health of Mothers and Children in Togo"*.

## THE TEAM, AND THE INSTITUTIONAL SITUATION OF THE PROJECT

The Coursier d'Hôpital International Togo is therefore the sole operator of the ISME project, with two partners co-chairing its steering: the Togolese Ministry of Health and Public Hygiene and the French Embassy. The former provides expertise in CHW training, while the latter is the main funding partner. They meet every six months to form a Steering Committee.



*Training workshop for CHWs and SFRs in Vô district on community-based Integrated Management of Childhood Illnesses (IMCI-C) and the danger signs of pregnant women*



*Delivery of kits coupled with the project launch ceremony in the prefecture of Vô in the presence of local authorities, representatives of the Ministry of Health and the French Embassy.*

The association's project team is currently made up of four people: its Executive Director Mr. Agbetiafa, assisted by Mr. Ben Satchi the Executive Assistant, alongside the Project Accountant Mr. Koudadié and its logistics officer, Mr. Koussi. They benefit from the supervision of a Board of Directors, chaired by Dr. Abalo. Finally, the association relies on a Medical Council composed of 4 specialists: 2 gynaecologists and 2 paediatricians.

## OPERATION AND TARGETS

The objective of the ISME-Togo project is to contribute to the reduction of maternal and child morbidity and mortality rates in the 7 health districts of the Maritime region (South of Togo). To this end, the project teams provided community health workers in the DokitaEyes region with their patient tracking and medical data reporting application. The use of the latter by CHWs should facilitate their work and assist them in their daily tasks, ultimately contributing to increasing attendance at the Community Health Units.

*"The ISME programme is a preventive tool, which aims to better reach populations that are traditionally vulnerable and far from healthcare centres"*

*Maziar Taheri, Cooperation Attaché at the French Embassy in Togo*

DokitaEyes has multiple functionalities, which not only allow CHWs to monitor health problems in the communities on a daily basis, but also the reporting of serious cases and doctor referrals, who will give a specialist medical opinion.

## Daily health monitoring of CHWs

Community health workers are generally recognised and trusted members of the community who are also valued by their status as health referents. They are thus regularly called upon for national vaccination campaigns and in direct contact with the civil authorities, while the project will seek their approval by the traditional authorities.



*Training of district CHWs and SDRs on the DokitaEyes application by ISME-Togo teams*

The CHWs are volunteers, who often have a sideline occupation (agriculture, handicrafts, etc.) and to whom the government pays a modest allowance, supplemented by a monthly payment of 7,000 FCFA [Franc from the African Financial Community] (just over 10 euros) for CHWs involved in the ISME-Togo project. The CHW's "traditional" work is to document the essential consultations it conducts with its community. Most often, the patients come to them, but sometimes it is the other way around and since health has no schedule, some patients come to the CHWs at any time, and sometimes they even call them directly. On a regular basis, these volunteers conduct health awareness campaigns in addition to their rounds of consultations.

## DokitaEyes Application

With the ISME-Togo project, CHWs are becoming more competent since they are receiving digital training. In addition to this their scope of action has expanded to the monitoring of diarrhoea and pneumonia. This training is spread over 3 days, including a full day dedicated to how to use the smartphone - which is offered to them - and social networks (YouTube, WhatsApp, Facebook) through which they will be able to communicate. Then there is training in the use of the application itself and the medical kit they receive. This includes, among other things, drugs such as paracetamol, amoxicillin or iron tablets, and measuring instruments such as blood glucose metres, blood pressure monitors and urine strips.



*Training of CHWs in how to use the DokitaEyes application by ISME-Togo teams*

The DokitaEyes application comes into play in the recording of patient data: thanks to a simple and intuitive module, the symptoms or their absence are recorded in the digital health record of each member of the community, which can be consulted at any time by the department's doctors. With "Les yeux du Docteur" [Doctor's eyes], no more data noted on loose sheets at the mercy of bad weather, nor health records that get lost. But more than just a digital notebook, the application will guide the CHW in their daily checks, ensuring they do not forget anything and assisting them in the diagnosis or dosage of essential medications. The agent therefore carries out three actions via the application:

- Monitoring of follow-up care for prenatal consultations by pregnant women and of vaccinations for children under 5 years of age;
- Checking that the households visited have mosquito nets and clean toilets;
- Health monitoring of the target persons, with verification of biological health data (temperature, blood pressure, haemoglobin level, blood sugar level, etc.).

In case of danger, they refer the patient to the next level up, the Health Training Manager (HTM), having previously recorded their health parameters on the application. When the HTM receives the report from the CHW, it can tell the CHW to administer medication to the patient from their medical kit or refer the patient to the Peripheral Healthcare Unit, which is then notified of the patient's arrival.



*Daily monitoring of a child under 5 years of age by a CHW*

### **Supervision by doctors from the DokitaEyes Medical Council**

If the HTM encounters any uncertainty about a case that has been referred to them, they must report it to one of the doctors at the Medical Council via the application: the data in the digital health record is then consulted by the doctor, who can ask for further information or call the patient. They may also request that the CHW conducts a follow-up visit later in the day or week.

*"We intervene when Health Training Managers are overwhelmed, to detect or interpret certain clinical signs they may have overlooked."*

*Paediatrician of reference from the ISME-Togo Medical Council*

*"Often pregnant women suffer with anaemia problems: we assist the CHWs with treatment, by increasing the dosage of iron in particular"*

*Gynaecologist of reference from the ISME-Togo Medical Council*

*"What's interesting is that thanks to digital technology, it's immediate: I can follow a patient from a distance, see that he/she is taking medication or making an additional visit, and even consult the test results that are recorded in his/her medical health record. In rural areas, it's revolutionary!"*

*Gynaecologist of reference from the ISME-Togo Medical Council*

The system also works in "offline" mode, since a partnership with the telephone operator Moov allows all users of the application to call each other free of charge. The application also allows doctors to give their patients direct prescriptions, who in turn

can order from registered pharmacies and pay in "mobile money".

## TECHNICAL SUPPORT AND SECURITY

The development of the application, which runs on the Android operating system, has been outsourced to a Togolese company, which is currently working on a 3<sup>rd</sup> version of DokitaEyes. All exchanges benefit from encryption technologies from start to finish to ensure the protection of health data. Several profiles have also been developed that give access to different modules depending on the identity of the user and which rights have been opened to them (CHW, patient, doctor, pharmacist, etc.). The partnerships between the Coursier d'Hôpital International Togo and Moov and Togocel allow the association to provide their users with free communications, but also provides them with mobile payment modules to pay for their medication purchases directly on the application.



The screenshot shows a registration form titled "Informations" on a green background. The form asks for the user's name and first name. Below the input fields, there is a warning: "PS: La saisie de fausses informations vous expose à des poursuites judiciaires". The form contains the following fields: a text field with "john", a text field with "doe", a text field with "docteur", a text field with "doc@mail.com", a dropdown menu with "Centre de santéAGBODRAFO", and a button labeled "Inscription".

*Visual of the DokitaEyes application: creation of an account for a medical personnel*

## IMPACT AND ADDED VALUE

⇒ **The first added value of the project is its contribution to the reduction of mortality among pregnant women and children under 5 years of age**

All of the project's monitoring indicators, from the initial pilot phase, indicate an increase in the attendance rate at the Peripheral Healthcare Units, which ultimately contributes to better overall care of the population.

*"We have noticed an increase in the attendance rate of Peripheral Healthcare Units in the 13 of the Vô health district, especially regarding children under the age of 5".*

*Doctor Akakpo, Prefectural Director of Health – Vô – member of the ISME-Togo medical council*

*"The application allows CHWs to refer patients to the Peripheral Healthcare Units more quickly and with greater certainty, resulting in increased management rates. We have already seen the impact on the mortality of children under 5 years of age and pregnant women"*

*Gynaecologist of reference from the ISME-Togo Medical Council*



*Handing-over of the Medical Kit to a community health worker in the Lakes Health District (South-East Togo)*

*"The fact of initiating the first treatments, free of charge, especially for anaemia with first aid drugs, leads to a strong increase in health in rural areas"*

*Paediatrician of reference from the ISME-Togo Medical Council*

*"Thanks to DokitaEyes, the CHWs are more efficient in their follow-up care for pregnant women, and manage to convince them more effectively to attend their prenatal consultations. "*

*Mr. Kouassi, logistics officer for the ISME-Togo project*

What's more, patients are taken care of earlier, thanks to the early warning system enabled by DokitaEyes. The cases treated are thus taken care of at a lower severity level:

*"Consultations are taking place earlier and fewer and fewer serious cases are being identified at the Peripheral Healthcare Unit level. "*

*Doctor Akakpo, Prefectural Director of Health – Vô – member of the ISME-Togo medical council*

*"The application saves an enormous amount of time. In the past, it was sometimes too late by the time children arrived at our health centres and the diagnosis was usually late. The ability to make a quick diagnosis and provide immediate care leads to the treatment of less advanced cases. "*

*Paediatrician of reference from the ISME-Togo Medical Council*

Now, if we look at the current statistics in Togo, infant mortality is 49 per 1,000 and maternal mortality is 400 per 1,000. The first observations of the ISME project therefore seem to indicate a progression of these indicators in the Vô prefecture:

*"We are dealing with 6,500 targets - 4,500 children and 2,000 pregnant women. Thanks to early diagnosis, we have yet to experience any deaths in our first 14 weeks of operation, except for one newborn whose parents have abandoned the required treatment due to lack of means"*

*Koffivi Agbetiafa, Executive Director of Le Coursier d'Hôpital International, operational manager of the ISME-Togo project*

⇒ **The second added value of the programme lies in the creation of direct and privileged access to a doctor for its beneficiaries**

*"In Togo, not all patients have access to a doctor: with DokitaEyes, it's like having a doctor at home! In addition, the presence of the doctor behind the CHW reassures the communities, who are quicker to accept their diagnosis.*

*Gynaecologist of reference from the ISME-Togo Medical Council*

This function of the programme also benefits the CHWs themselves, who see their level of training increase:

*"With the application creating proximity and immediacy, CHWs are followed much more closely by HTMs and doctors. This allows them to revise their protocols and generally increase their health knowledge, which benefits the population as a whole."*

*Dr Hemou, Paediatrician of reference from the ISME-Togo Medical Council*

⇒ **Finally, the project allows for better use of health data**

The data collected on digital health records is one step forward, facilitating remote consultation by authorised medical staff and the retention of this data over time for the benefit of the patient.

*"Before the project was set up, families always had to buy back health records, which they lost regularly. So this way the communities save money. But another crucial point is that DokitaEyes now allows the doctor to access the patient's medical history, which is very useful for people who move and change practitioners, for example"*

*Mr. Ben Satchi, assistant to the ISME-Togo project manager*



*Daily monitoring of a child under 5 years of age by a CHW*

The application's contribution to the country's health services has thus been recognised and valued by numerous awards, including the RFI Challenge App Africa 2015 (Top 10), the Africa Digital Award in Cotonou in 2018 and the Africa Moves in Tunis in 2019.

## **ECONOMIC MODEL AND FUNDS ALLOCATED**

The initial phase of the project was entirely financed by the French Embassy in Togo, for €10,000. Its successor, the ISME-Togo project, is receiving overall funding of €699,000.

It is important to note that the association Le Coursier d'Hôpital International created its start-up in August 2016, to develop, in parallel with its awareness-raising activities, reasonably priced digital health services, which notably enable it to finance the

activities of its association. Aiming to make a real success of the ISME programme, whose funding expires at the end of 2020, the association would like to now develop more paid services, in parallel with the subsidies it would seek from new sponsors.

One of the avenues studied is to use the income generated by the sale of digital health records. In fact, while the DokitaEyes application services are free of charge for the communities (a path that goes from monitoring to diagnosis, since the patient remains responsible for his or her own care in the Peripheral Healthcare Unit), the digital health record is sold for 4,500 FCFA [African Financial Community Franc] in urban areas and 1,400 FCFA in rural areas, payable in several instalments. A complementary approach envisaged by the start-up's business model is based on communication, which must target urban users to generate more profit, since they pay a higher fee.

The main costs of the programme are now based on salaries (project team and medical staff), equipment (mainly the CHW kit), development of the application, rental of the association's headquarters, training and communication.

## DIFFICULTIES ENCOUNTERED AND ROADMAP ENVISAGED

### Difficulties

The main difficulties encountered in the development of the ISME-Togo project have been related to digital technology, particularly concerning the digital skill level of CHWs and some health facility managers.

*"Bringing telemedicine to rural areas was a challenge: at first, even health professionals of the Ministry of Health didn't believe it was possible especially in rural areas. It was unheard of and so it was necessary to convince and convince again"*

*Koffivi Agbetiafa, Operational manager for the ISME-Togo project*

Secondly, the financial aspect may also have posed difficulties, since the programme was not designed to finance patient consultations but only preventive diagnosis.

*"Some families lack resources, and once they arrived at the Peripheral Healthcare Unit, they didn't understand why they were asked to come if it wasn't to finance their consultations."*

*Koffivi Agbetiafa, Operational manager for the ISME-Togo project*

### Roadmap

The project is scheduled to end in December 2020, but Agbetiafa's teams plan to continue the project in the same format, by seeking new resources from various sponsors (USAID in particular was mentioned), but also by diversifying the project's sources of income, as we have seen, through the use of the application by the informed patient.

Nevertheless, the project as conceived by the French Embassy is a pilot project, which intends to expand in other regions of Togo, if the conclusions of the programme are positive in the Maritime region.

By June 2021, the figures quoted by the project thus aim to cover:

- 100,000 children under 5 years of age living in rural areas more than 5 km from a Peripheral Healthcare Unit.
- 25,000 pregnant women living in rural areas more than 5 km from a Peripheral Healthcare Unit.
- 455 CHWs trained in Integrated Management of Childhood Illness (IMCI-C) modules and danger signs for pregnant women.
- 250 healthcare workers in the Peripheral Healthcare Units trained in the Integrated Management of Childhood Illness (IMCI-C) modules and danger signs for pregnant women.

## COVID-19 FOCUS

**Situation report:** Togo had 76 cases on 10 April 2020, 27 of which were cured and 3 of which ended in deaths. The Lomé region has been on lock down since 20 March and there is no more inter-prefecture travel. Schools and universities are closed, with a curfew from 8pm to 6am. Wearing a mask is recommended.

**Daily ISME operations:** the situation is affecting the work of CHWs, and many no longer want to go out into the field, mainly to avoid serving as a carrier for the spread of the virus. A partnership is underway with an NGO in Lomé for the manufacturing of masks, which will be used to protect all project actors, including CHWs.

*"In the current pandemic, DokitaEyes is paying special attention to help raise awareness on health and pandemic risks"*

*Maziar Taheri, Cooperation Attaché at the French Embassy in Togo*

**ISME shares:** The ISME-Togo project decided to use the features of its application to develop a module dedicated to the fight against Covid-19. The latter has been in service since June 1st with volunteer doctors. It consists of two parts: the "personal notes" part of the application, where the patient can describe their symptoms. This is a service designed for the elderly and patients with a pathological history or at risk of covid-19 contamination. Thanks to the setting up of a college of general practitioners, these notes will be examined on a daily basis and a permanence is set up for their follow-up. In case of doubt, the patient will be able to call the doctor via the application at a flat rate. The fees normally charged by the association have been lowered to the maximum for calls concerning Covid-19.