

Prevent the spread of infection by promoting proper hand hygiene

Human Resources Development Products & Services Industry/Social Infrastructure

Promote handwashing in communities and the alcohol disinfectant in hospitals

In Uganda, the “Wash A Million Hands” project has been implemented since 2010 through the cooperation between the United Nations Children’s Fund (UNICEF) and Saraya Co. Ltd. (Saraya), a Japanese manufacturer of cleansers and disinfectants. The project aims to improve children’s health and hygiene by promoting proper handwashing.

Saraya has also established the “100% Hospital Hand Hygiene” project, focusing on the fact that more people die from nosocomial infections than from malaria, tuberculosis and HIV combined per year in the world. So far, the project has achieved significant results in preventing healthcare-associated infections in hospitals and clinics. For example, it has been reported that in collaboration with the Japan International Cooperation Agency (JICA), two public hospitals in Gombe and Entebbe, located in Central Uganda, carried out a demonstration experiment of alcohol-based hand disinfection, resulting in a dramatic reduction of healthcare-associated infections in the maternity wards.

Furthermore, in 2014, Saraya set up a production facility in Uganda to produce alcohol hand sanitizers, starting local production and sales of its products. By establishing a sustainable social business, Saraya contributes in solving social challenges facing East Africa.

Project Implementer: Saraya Co., Ltd. | Alignment: CS



▲ Performing hand hygiene using alcohol disinfectant at hospital in Uganda.

Alcohol hand sanitizer “Alsoft V”

Saraya developed a quick-drying alcohol disinfectant that enables effective hand hygiene in a short time, even for nurses working in intensive care units, with an average of 22 hand-hygiene opportunities per hour. This special formulation is effective against non-enveloped viruses that cannot be inactivated by normal alcohol disinfectants, contributing to the prevention of the spread of infection in Africa.



▲ Saraya’s alcohol hand sanitizers produced in Uganda.

Interview



Takeo Hojo
Managing Director,
Saraya Manufacturing
(U) Ltd.

In the absence of a hygienic environment, proper handwashing is the easiest and most effective means of preventing infection from spreading in local communities. Thus, through UNICEF, Saraya has promoted activities such as workshops and training courses to raise awareness about the importance of handwashing. The coverage rate of handwashing has now increased, from 14% (2006-07) to 38% (2019-20).

Saraya hopes to contribute to improving the hygienic environment in Uganda, along with promoting synergy between hospital hand hygiene using alcohol disinfectant that the company proceed with further business, and handwashing habits in local communities led by UNICEF as a CSR initiative.

Local production of alcohol hand sanitizers to prevent nosocomial infections

Hygiene education by instructors

A local subsidiary of Saraya in Uganda employs and trains “hygiene instructors”, who take roles in teaching hygiene practices and knowledge about hand disinfection. They regularly visit hospitals to check how disinfectants are used, and use their findings to conduct more effective educational activities.

Symposiums and seminars are also organized with an aim to contribute to the understanding of nosocomial infections and the efficacy of alcohol disinfection.



Infection control training conducted in Jinja, south-eastern Uganda

Business model for local consumption

Use alcohol derived from sugarcane as a raw material, which is actively cultivated in Uganda. Procure bio-ethanol as a main raw material from Kakira Sugar, East Africa’s leading sugar producer, which is distilled from the by-product of sugar refining, and produce the disinfectant.

Saraya is also contributing to the creation of local employment and industry, by managing the entire supply chain in Uganda from procurement of all raw materials (except spray pumps) to sales.



Realize sustainable production of alcohol hand sanitizers at a fair price

Collaboration with other institutions

Saraya, launched the public health project, continued its large-scale intervention by collaborating with the JICA, international organizations such as the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), as well as the University of Geneva.

Also in 2013, the 1st East Africa Infection Prevention Conference was hosted by the Ministry of Health Uganda, co-hosted by the local subsidiary, Saraya East Africa Co., Ltd., and supported by the JICA Uganda office. The conference aims to expand activities to provide improved access to sanitation and hygiene, which started in Uganda, throughout East Africa.



A scene of the 1st East Africa Infection Control Conference

Interview



Ajok Robinah
Health instructor

We started by getting staff in the best national hospital to know that alcohol disinfection is necessary. Saraya tried to explain to them scientifically that alcohol disinfectant is very effective in preventing infections and provided detailed instructions on how to use them. It is not easy to change the way things were done before. Repeated explanations are needed to get them into that habit.

By simply knowing infection prevention basics, it can prevent infections and save many lives. The goal of public health is to prevent disease. This is a very important job to save the lives that can be saved.

Saving Lives by Providing Electricity and Internet

Human Resources Development Products & Services Industry/Social Infrastructure

Kit with 3 roles in 1 unit for safe nighttime medical care



▲ We want to save the lives of mothers and children! With this in mind, we signed an MOU with the Ministry of Health and introduced the kits at 10 clinics.

Sub-Saharan Africa, where there are many unelectrified areas where electricity cannot be used. In these clinics, early morning and late at night, patients are treated and deliver babies in the dark, relying only on penlights and other lights, making the provision of dangerous medical care a challenge.

The "TUMIQUI Project" to deliver electricity and internet for such un-electrified medical care has developed a portable kit that combines solar panels, storage batteries, and internet functions. The kit also comes with a portable, rechargeable LED lamp, designed to provide cordless lighting for use in medical and maternity rooms without lighting.

In 2019, the company signed an MOU with the Senegalese Ministry of Health to conduct operational demonstrations to un-electrified clinics. We found that there was a lack of electricity supply and no internet connection from the site, so we added Wi-Fi functionality to the kit, contributing to the ability to update medical records on the web from the sites. We are contributing to the development of healthcare and education through digitalization of electricity and internet.

Project Implementer: SUCRECUBE Japon Inc. | Support: MIC

Solar power generation kit "TUMIQUI Smart Kit"

A portable kit that includes a solar panel, a storage battery, a c internet device that connects to Wi-Fi, and an LED light bulb.



In addition to lighting, the kit provides USB charging for cell phones and other devices, and also comes standard with a 220 V power supply, enabling the use of PCs and small medical devices.

No installation is required, and the one-kit system can be easily handled by anyone.

▲ "TUMIQUI" named from the meaning of "accumulating people's thoughts"

Interview



Koichi Sato
President and CEO,
SUCRECUBE Japon Inc.

When I visited rural Africa, I became interested in the challenges of unelectrified regions. In 2019, when I visited Senegal on a JICA tour, I was greatly shocked to learn that many mothers and children lose their lives in childbirth in the dark. I also learned that repairs in Africa are difficult.

I then decided to take up this challenge to save the lives of mothers and children. We developed a kit that can be easily handled by anyone, with no installation required, and established a mini-factory in Dakar in 2020 that can handle local production, maintenance, and repair.

We will continue to further promote local employment and technology transfer, and contribute to Africa's development through the power of the private sector.



More information on the TUMIQUI project, here →

Contributing to healthcare, education, and agriculture in Africa with Our technology

Maximize use local resources

We aim to solve various problems and develop Africa with solar energy, taking advantage of the characteristics of Senegal, which is blessed with fine weather about 300 days a year.

For this purpose, human resource development, such as safe childbirth and education, and technology transfer are important, and electricity and high-speed internet are necessary to realize these.

Establish a system in which production and maintenance and repair are carried out locally as much as possible. We will build a sustainable co-creation society with "Made with Japan" that combines local wisdom and Japanese knowledge.



Solving the various challenges of the SDGs and leading to sustainable development in Africa

Activities with an eye on the future

We have established a factory locally and hired graduates of Senegal's technical schools. We are promoting the training of engineers who can also perform maintenance, and are carrying out activities with a view to transferring technology and authority to the local market.

In 2021, the project won a special award at the 5th Japan SDGs Awards organized by the Japanese Ministry of Foreign Affairs.

With the support of the government, we will continue to contribute to the SDGs and peace in Africa.



10 clinics, 5 schools evaluated for electrification and Internet connectivity

Supporting sustainable development

A memorandum of understanding was concluded through tripartite cooperation (Ministry of National Education of Senegal, City of Sandiara, and SUCRECUBE Japon Inc. Installed power generation and internet systems in schools in Sandiara, electrified the schools, and implemented high-speed internet.

The project also realized remote digital education by utilizing the Ministry of Education's videos. Furthermore, we will apply this experience in the fields of health and agriculture to install digital infrastructure for optimum power and internet.



Digital classes started in an unelectrified and no internet area

Interview



Dr. Baye Thiam
Health clinic Ndiaobambaly

Q. How do you feel now that you have started using the TUMIQUI Smart Kit?

A. We used to deal with early morning and nighttime births by adding a lamp to the mouth. Now, the TUMIQUI lamp provides a bright light, and I am able to give birth safely. And best of all, we can now have a Wifi connection from the clinic and input consultation data without having to travel to a distant city, reducing the number of days we are closed, which is very convenient.

Q. Has TUMIQUI changed your life?

A. Yes, of course! It's greatly improved my practice environment, and it's helped tremendously!

Aiming to lower the high death rate of expectant and nursing mothers through Apps

Human Resources Development Products & Services

Developed apps that lead to safe births (for midwives & pregnant women)

Tanzania's opportunities to provide medical care are not keeping pace with the rapidly growing population, and the maternal mortality rate is extremely high at 524 per 100,000 (in 2017). This is due to the low number of antenatal checkups (Tanzania: average: 3-4 checkups / WHO recommendation: 8 checkups) and the lack of health guidance. The challenges are that the medical records of pregnant women are not managed centrally, and pregnant women do not have knowledge about pregnancy and childbirth.

Castalia Co. Ltd. has developed "Taarifa za Mama (Mama's Record)," an application that builds an information network for pregnant women. Midwives can share data with different medical institutions on the health checkups of pregnant women. The current complicated and chaotic pregnancy checkups will be simplified. In addition, pregnant women can check the contents of their checkups and information about the next checkup through the application.

We aim to reduce maternal deaths by continuing health guidance and increasing the number of checkups.

Project Implementer: Castalia Co. Ltd. | Support: METI



▲Pregnant women with their families receive an explanation of the application.

Personal Health Record App "Taarifa za Mama"



Two apps, one for midwives and one for expectant mothers, work together. It was uniquely developed to meet the actual midwifery situation, challenges, and needs in Tanzania. We pursued simple operability so that even those unfamiliar with smartphones can easily use them. In addition, the application can be used offline, even in environments where the network is unstable.

Interview



Minami Suzuki

Business Manager,
Castalia Co. Ltd.

When we decided to digitize our maternity checkups, we were concerned about whether the midwives would accept the application and whether pregnant women would need it. However, in a demonstration test conducted in Dar es Salaam, veteran midwives with an average age of 51 years actively promoted the application to pregnant women, and nearly 800 women became users in five months. We gained confidence that the application is meaningful for both midwives and pregnant women.

In a survey conducted after the demonstration test, we asked the question "Would you like to use this app for your next pregnancy?" and all of the pregnant women who responded answered "Yes".

In Tanzania, where it is difficult to obtain appropriate information on pregnancy and childbirth, the app has received a high evaluation as a medium for easy communication with midwives.

Use of apps to make pregnancy and childbirth experience a positive one

Improved consultation efficiency

Medical examination data is stored in the cloud. Past consultation data can be shared even from different medical institutions. This reduces consultation time and increases the amount of time spent providing care to pregnant women, such as health guidance.



Pregnant women waiting to be examined, one of the factors that discourage them from coming to the hospital

Continued health guidance

Pregnant women and their families can easily and at any time check their pregnancy status, medical consultation details, and precautions during pregnancy on their smartphones.

On the application's social networking service, daily postings of concerns and worries about pregnancy, childbirth, and child rearing contribute to reducing the anxiety of expectant mothers.



Pregnancy checkups using the app "Taarifa za Mama" (Mom's Record)

Increase in antenatal checkups

The application will send reminders of the next checkup date and instruct the patient to come for a checkup on SNS. The goal is to encourage regular antenatal checkups and increase the number of antenatal checkups.



An expectant mother checking on the app while waiting for the bus

Interview



Salome Herman Salu

(photo on the left)

Midwife (site supervisor)

This application is very efficient and effective to us and our clients. Please if possible, should put it in all Reproductive Child Health clients in Tanzania.

I'm definitely sure it would help to reduce fetal and maternal deaths. Thanks.

Providing ICT solutions to care patients from onset to recovery

Human Resources Development Products & Services Industry/Social Infrastructure

An app that connects to specialists makes telemedicine smoother

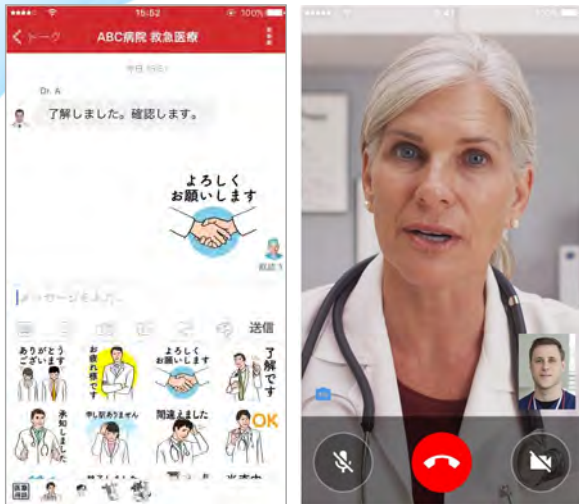
Ghana has a chronic shortage of medical resources with 1.1 doctors and 9.8 nurses and midwives for a population of 10,000. And there are huge disparities in the quality and access of health care in different regions.

In this project, "Join," a communication app between medical professionals developed by Allm Inc was utilized. The goal of this project was to build a base for telemedicine, which enables to provide the appropriate medical services from anywhere at any time.

Use the Join platform to build a consultation network, primarily between doctors. In addition to neurology and cardiology diseases such as stroke and myocardial infarction for which early diagnosis is required, it is possible to treat various diseases such as COVID-19 and tumors.

Also, as a mobile hub, it can be linked with imaging/biometric devices and various medical information systems. In addition, AI-driven diagnostic results can be utilized, contributing to prompt and appropriate treatment strategies by local healthcare professionals.

Project Implementer: Allm Inc. | Support: METI



▲Ability to communicate in a variety of ways, including chat, image sharing, voice and video calls

Health Communication App "Join"



By viewing medical images in the built-in DICOM viewer and sharing them via chat, it becomes a consultation tool that connects you to an outside doctor at night or on holidays. In addition, it is also used to coordinate hospital transfers of emergency patients and to share information.

Interview



Yusuke Kumaki
Group Manager,
Team Platform Department
Allm Inc.

To date, we have established a telemedicine network using ICT in approximately 30 countries. Based on this experience, we were able to build a collaboration network among medical institutions and medical professionals in Ghana.

In particular, the collaboration between community health workers (CHW) and medical institutions in Ashanti was evaluated by local health workers and the government for its usefulness. Discussions have also begun for a nationwide rollout.

We will continue to contribute to improving the quality of healthcare in Ghana through ICT while ensuring business continuity.

Telemedicine using mobile ICT to improve the quality of healthcare in Ghana

Development of Rural Systems

Each community has a nurse (Community Health Worker: CHW) in Ghana. In the case of a disease that can not be handled there, consult a health care provider as well as a community-based health planning service (CHPS) or a "teleconsultation-center" that is connected to a medical professional through a telephone consultation center. However, the information was confusing because of the dispersed contacts.

Efficient patient care was achieved by establishing a communication path using the App "Join."



CHW Network in Ashanti

CHW collaboration in Ashanti

The use of the App "Join" has also made it possible to consult using photos and videos, thus contributing to improving the quality of primary care provided by CHW.



Briefing session at the site

Building cooperation among hospitals

Join was deployed to seven medical institutions in Ghana's capital Accra. Primary care facilities are now able to request consultations to higher-level health care providers about cases and transfers.

By building a telemedicine network, including medical images and efficiently operating local medical resources, we are contributing to solving Ghana's social problem of insufficient medical resources.



Network of Healthcare Organizations in Accra

CASE STUDY

Collaboration between "M&M Medical Centre" and "Korle-Bu Hospital" (Gynecology)

- 《Timeline》 12:20 M&M Medical Centre : Patient arrives at the emergency room
- 12:30 M&M Medical Centre → Korle-Bu Hospital (Specialists)
: Patient case registration and information sharing through the App "Join"
- 13:00 Korle-Bu Hospital (Specialists) : Clinical evaluation on the "Join"
- 14:00 Korle-Bu Hospital → M&M Medical Centre : Diagnosis and treatment suggestions



Improve quality of laboratory testing for early detection of NCDs

Human Resources Development | Products & Services

Introduce the state-of-art Urinalysis Technologies to Ghana

In Ghana, early detection and early treatment of NCDs (Non-Communicable Diseases), which are increasing with economic development in urban areas, is required, and screening tests are becoming increasingly important.

Urinalysis is a simple and rapid test to assess systemic conditions, and is also used for early detection of renal diseases that often develop against a background of lifestyle-related diseases.

This project aims to increase understanding of the clinical value and utility of automated urinalysis testing by introducing the fully automated urinalysis modular system and training medical personnel (doctors, clinical laboratory technicians, etc.) for Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana's second largest city, through the dissemination of automated urinalysis technology.

It contributes to the improvement of laboratory test throughput and accuracy in the hospitals nationwide in Ghana.



A fully automated urinalysis modular system



From the manual operation to the automated operation

With our UN-Series we cover the complete urinalysis workflow. It is capable of performing urine chemistry tests (urine qualitative tests), which are performed as primary tests, and urine sediment tests (urine sediment tests), in which specimens with abnormalities are analyzed in detail, as well as fully automated imaging diagnosis of urine specimens. The system is also equipped with an online maintenance management system that enables remote maintenance, external accuracy control, and provision of information via the Web.

Project Implementer: **SYSMEX CORPORATION** | Support: **JICA**

Interview



Elijah Cooper AGGREY

Sysmex West & Central Africa Ltd.

Urinalysis is invaluable in the diagnosis of urologic conditions such as calculi, UTI, and malignancy. It can also alert the physician to the presence of systemic disease affecting the kidneys.

The project took off in 2018 with the installation of the complete UN-Series at KATH and capacity building through trainings for laboratory scientists and physicians in order to reinforce urinalysis.

The project also held a scientific conference which was attended by medical scientists and clinicians from various health facilities in the Ashanti Region and beyond, thus contributing to their continuous professional development.

Transforming Urinalysis in Ghana with operational excellence and clinical value

Laboratory operation improvement

Conventional routine diagnostic techniques for urinalysis are Time-consuming (48-72 hours turnaround time), laborious (multiple procedures from sampling to confirmation), cost, and the quality (accuracy) of the test results.

A fully automated urinalysis modular system can significantly increase the number of test parameters, throughput, and accuracy, thereby standardizing and streamlining laboratory operations.



Human Resource development



Symposium and training for the KATH laboratory specialists

Rolling out nationwide in Ghana

Sysmex started with 3 units in KATH in the Ashanti Region and then we disseminated to other Teaching Hospitals, Regional Hospitals, District Hospitals, Military Hospital, and other private hospitals across Ghana. We deliver high quality products made in Japan, and provide Service & support and trainings from Sysmex West and Central Africa, the local subsidiaries in Ghana.

Sysmex will continue to support the hospitals by supplying reagents and providing Service & support, and capacity building programs to make the laboratory operation more sustainable and strengthened.



Handover Ceremony at KATH

Interview



Dr. Oheneba Owsu-Danso

Chief Executive, KATH

KATH is grateful to Sysmex and JICA for this project which has equipped the hospital with such a high quality and high-volume equipment for urinalysis.

A fully automated urinalysis modular system's "UN-Series" with its high throughput will facility management of Non-Communicable Diseases. The data generated will also be useful for research that will provide information which will be utilised for better patient management in the future.

Public-Private + Cross-Industry Collaboration to Improve Health and Nutrition

Human Resources Development Products & Services

Toward solving Ghana's complex health challenges



"Ghana Nutrition Improvement Project" was launched in 2009 by Ajinomoto Co., Inc.. Since 2017, the Ajinomoto Foundation has taken over and expanded the project. The first project was the development, manufacture, and distribution of "KOKO Plus®", a supplement containing amino acids to supplement nutrients lacking in koko, a corn porridge that is a traditional baby food in Ghana. Through these activities, we contributed to the improvement of infant nutrition.

Based on these activities, in 2021, the company will be part of the "Africa Health and Wellbeing Initiative" activities promoted by the Cabinet Secretariat's Health and Medical Strategy Office. A new concept was proposed: combining Japan's high-quality testing with ICT to contribute to the health of mothers and children in Ghana. Together with Sysmex Corporation and NEC Corporation, the project was commercialized with the support of the United Nations World Food Programme (WFP) in 2022.

Accelerate efforts to improve nutrition for mothers and children in Ghana. And we aim to build a mechanism that will contribute to the promotion of sustainable and stable economic growth.

Project Implementer: The Ajinomoto Foundation | Alignment: CS

Nutritional Supplement "KOKO Plus®"



In addition to the main ingredient soybeans, this powdered supplement is rich in nutrients such as lysine, vitamins, and minerals. By mixing it with traditional foods that are nutritionally deficient, it is a tasty way to supplement nutrients necessary for children's growth.

Interview



Takashi Uesugi
Secretary General,
The Ajinomoto Foundation

As a social business, we aim to build a sustainable system in collaboration with various organizations, instead of providing free nutritional food for a limited period of time.

We work with the University of Ghana for product development and nutrition efficacy study, with Ghanaian food companies for production, with NGOs for promotional marketing, and with the Ghana Health Service (GHS) for nutrition education and product recommendations. We also receive partial funding from international organizations such as the Japan International Cooperation Agency (JICA), the U.S. Agency for International Development (USAID), and WFP.

By bringing together the wisdom and thoughts of various fields, we are working to solve social issues related to nutrition and to improve the nutrition and health of people living in our society with a primary focus on improving nutrition and health.

Approaches to Maternal and Child Health and Nutrition issues in Ghana

Local production with support

The nutritional supplement "KOKO Plus®" is produced using locally available high-quality protein sources such as soybeans and oil. By procuring ingredients locally, we aim to increase the income of farmers and other primary producers.

We also contribute to local employment by outsourcing production to a local food manufacturer, Yedent, a local food company, by providing them with the production and quality control know-how of Japanese companies and organizations.



A mixing machine for raw materials in a "KOKO Plus®" manufacturing plant

Promotion with Nutrition Education

To improve children's nutrition, parents need to gain knowledge about nutrition and change their behavior. For this purpose, regular guidance by nutritionists and nurses is effective.

Therefore, the Ajinomoto Foundation signed a memorandum of cooperation with the Ghana Health Service (GHS), the Ministry of Health of Ghana.

In addition to jointly developing nutrition education tools and implementing them at health centers, we are collaborating on "KOKO Plus®" and other programs to improve and disseminate nutrition knowledge.



Nutrition education for mothers

Private Partnership Projects

Through the "Africa Health Initiative and Wellbeing" the project will evolve into a new collaboration of three Japanese companies in 2022.

The project aims "nutrition education," "Dissemination of diagnostic technologies for the early detection and treatment of anaemia and malaria," and "health system enhancement through human resource development in the hospitals" through utilizing ICT.

Utilizing innovative ICT and clinical testing technologies originating in Japan, we will contribute to creating environments where pregnant women, mothers, and children can enjoy high quality nutrition and health services.



Sysmex hematology analyzer installed in the pilot project



Explanation by NEC (Kick-off meeting at the site)

Interview



Justice Ofori-Amoah
Sekyere East District Director,
Ghana Health Service (GHS)

This partnership has been a savior for the region. There were no other options for improving malnutrition, and cooperation with KOKO Plus was the only solution.

We want to create an environment where more people can get enough nutrition.

Interview



Debora Nuako Manu
Nurse,
Ghana Health Service (GHS)

I once met a mother with a child in poor health. I recommended "KOKO Plus" to the family.

When I met the child after that, he was in great health. He seemed to have regained his health.

Tests from Japan lead to early detection and treatment of tuberculosis

Human Resources Development Products & Services

Diagnostic technology developed in Japan contributes to TB control



▲ Training in Japan

The level of health care in urban areas is relatively high in Zambia among Sub-Saharan countries. However, there are areas called "compounds" where medical care systems are not well developed. This is why the incidence of tuberculosis is extremely high at 319 per 100,000 people (WHO / 2021).

Accordingly, EIKEN CHEMICAL CO.,LTD. (Eiken) launched a project in 2017 with the aim of popularizing its unique diagnostic technology, PURE-TB-LAMP, and establishing a continuous testing system. In collaboration with the Ministry of Health of Zambia, Eiken began training at the University Teaching Hospital (UTH) as a local trainer for PURE-TB-LAMP.

Also promoting the implementation of PURE-TB-LAMP. It has become possible to provide highly sensitive tuberculosis tests at 30 facilities in Zambia. In February 2022, the PURE-TB-LAMP Training Center has been opened in the Chest Disease Laboratory (CDL).

It is contributing to reduce the incidence rate of tuberculosis by improving the TB detection rate.

Project Implementer: EIKEN CHEMICAL CO.,LTD. | Support: MHLW, NCGM and CS

Loopamp™ MTBC Detection Kit "PURE-TB-LAMP"



PURE-TB-LAMP is a simple and rapid test for tuberculosis infection that uses a unique nucleic acid amplification method, the LAMP (Loop-mediated Isothermal Amplification) method, with

a one-step detection process.

In addition, up to 14 samples can be tested one time (up to 70 samples per day), which is expected to improve processing capacity.

PURE-TB-LAMP has been endorsed in the WHO POLICY GUIDANCE since 2016.



Extraction Kit for DNA of bacteria etc. "Loopamp™ PURE Extraction Kit"



Operator training

Improving tuberculosis diagnosis techniques

At first, there were various challenges, such as handling equipment and understanding procedures, but through training and communication, we were able to communicate that molecular diagnostics and PURE-TB-LAMP are necessary and important technologies for tuberculosis control.

In a demonstration test with 7 laboratory technicians, very good results were obtained, such as a more than 50% improvement in the detection rate of tuberculosis, which could be presented in a poster at the 49th World Congress of Lung Diseases.



Training at the University Teaching Hospital (UTH)

Providing technical training and spreading the inspection system for sustainable medical care

Establish a diagnosis system

Tuberculosis control requires early and accurate diagnosis and treatment. The project fostered laboratory technicians with accurate technology through training aimed at promoting Japanese molecular diagnostic (PURE-TB-LAMP), which can provide simple and quick results.

As laboratory technicians have acquired an understanding of and skills in Japanese diagnostic technology, they will be able to establish a system for testing, and the widespread use of PURE-TB-LAMP is expected.



Technical training by local trainers

Achieving sustainable health care

The laboratory technicians trained by the project voluntarily and persistently operational training programs for other laboratory technicians on site.

As a result, PURE-TB-LAMP was evaluated as effective for tuberculosis control. And widespread use in the resource limited settings has led to improved tuberculosis testing. In addition, it is expected that these activities and the effects of the introduction will in turn contribute to UHC.



Achievement of SDGs (UHC) goals by 2030

Spreading technology to the periphery

The training center, which was established in collaboration with the Ministry of Health, the National TB Program (NTP), the Chest Disease Laboratory (CDL), and others, is also disseminating tuberculosis diagnostic technology to neighboring countries.

In 2022, PURE-TB-LAMP to be adopted in both the National Strategic Plan 2022-2026 for TB issued by the Ministry of Health and the Tuberculosis Laboratory Guidelines by the CDL. These are major achievements of this project.

In order to promote Japanese medical technology in Zambia, a signatory to the MOU, Eiken will continue to strengthen cooperation with the Global Fund and other stakeholders.



Diagnosis and treatment make a better quality of life

Interview



Dr. Patrick Lungu

Dr, MD, PhD
National Tuberculosis Program (NTP) Manager

TB-LAMP Project roll out has proven to be a good solution to the expansion of TB diagnostic services that the TB program has embarked on. A number of the TB diagnostic facilities that are in rural districts do not have electricity making it difficult for GeneXpert placement. The TB-LAMP has been the ideal equipment for the resource limited settings since the equipment can run with solar panels.

Secondly the TB-LAMP testing has contributed to the increase in access to molecular testing and the TB notifications as it has been placed in sites which were using smear microscopy.

National TB Program looks forward to receiving more equipment and reagents under the TB-LAMP Project roll out.

Training and Site Visits help improve CT inspection techniques

Human Resources Development Products & Services

Supporting patients through inter-hospital communication



▲ Training in the CT room

In 2015, a Japanese-made computed tomography system (MDCT) and angiography system were introduced to the University Teaching Hospital (UTH), the largest hospital in Zambia, but they were not operating well.

Therefore, in 2017, after a preliminary inspection, UTH trainees were invited to the National Center for Global Health and Medicine (NCGM) in Japan for training on effective imaging methods of MDCT, use of contrast media, and operation of imaging rooms.

In 2020, we switched to online training due to the spread of COVID-19 infection, and in 2021, we provided training to a hospital in the regional city of Livingston to improve CT imaging techniques, accuracy control methods, and techniques for explaining to patients.

In the future, we will also provide medical safety education to the surrounding community. We will contribute to the provision of safe and appropriate medical care by local healthcare professionals.

Project Implementer: NCGM | Support: MHLW, NCGM

64-row MDCT (made in Japan) at UTH



High-resolution images taken at high speed can provide a clearer view of damage and lesions in the body.

This is especially helpful in the diagnosis of trauma, and critically ill patients.



Approved as a clinical guideline at Zambia

This project has been working on the Guideline for Coronary CT since 2017. With high acknowledgement of this guideline has been as a policy document and approved by the Ministry of Health as a clinical guideline for Zambia.

Through maintaining a network mutual voluntary study sessions will continue be held in the future. This will promote the equalization of medical standards.



Cover of clinical guidelines approved by Zambia's Ministry of Health ▲ "Guidelines for coronary angiography using computed tomography (CT) in Zambia Ver. 1.0"

Eradicating Preventable Blindness and Visual Impairment

Human Resources Development | Products & Services | Industry/Social Infrastructure

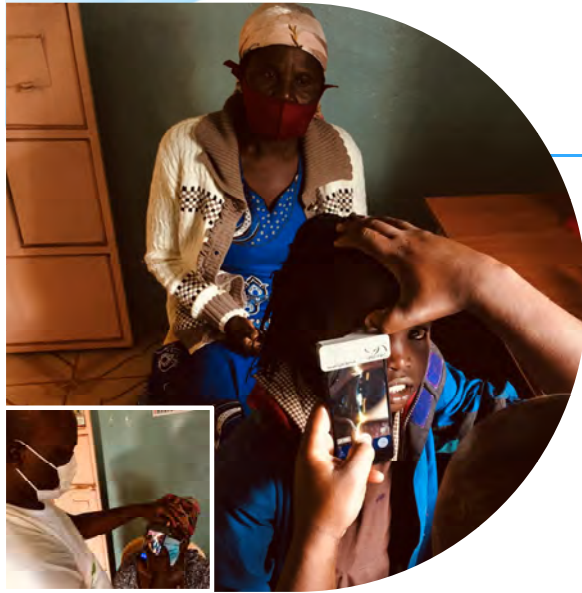
Smartphone-attachable device from Japan to change ophthalmic care around the world

OUI Inc., a venture company founded by an ophthalmologist at a Japanese university, has created a Smart Eye Camera (SEC), an ophthalmic medical device, which enables ophthalmologists to perform diagnosis in various environments where previously they couldn't perform diagnosis.

With a vision which is "to reduce blindness by 50% by 2025 in the world," the company has conducted in more than 20 countries around the world, including Asia and Africa, in collaboration with local ophthalmologists, NGOs, medical institutions, and international organizations.

In Kenya, starting in March 2021, OUI Inc is contributing to remote ophthalmology treatment for underpopulated areas by utilizing SEC in collaboration with Kisii Eye Hospital, which performs more than 10,000 cataract surgeries a year for the poor, and local ophthalmology clinics and medical institutions, including projects sponsored by the International Finance Corporation (IFC).

Project Implementer: OUI Inc. | Alignment: CS



▲ Local medical staff using SEC to perform ophthalmic diagnosis in a rural Kenyan village.

Smart Eye Camera (SEC)

Using a mobile camera with light source, SEC can emit three different types of lights necessary for the diagnosis of the anterior part of the eye (the anterior ocular segment) such as cornea or conjunctiva. It was proved that SEC have almost the same mechanism as traditionally used "slit-lamp" microscope, so it enables ophthalmic examination anywhere, even in the areas without electricity or in the disaster-stricken areas.



Interview



Nakayama Shintaro
VP of Global Business,
OUI Inc.

Approximately 43 million people worldwide became blind (in 2020) and more than 2.2 billion people have visual impairment, more than half of which are said to be caused by preventable or treatable diseases.

In Kenya, the number of ophthalmologists is estimated roughly 150 for the population of around 50 million. There are many who fall into blindness or visual impairment caused by preventable or treatable diseases such as cataract and trachoma due to almost no access to the eye care, especially in rural areas and medically underserved areas.

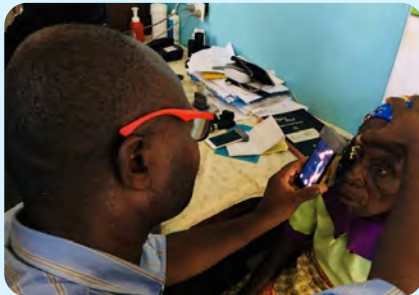
Using SEC, we are working hard with local ophthalmologists, doctors, and healthcare providers to co-create a new model of remote diagnosis that will ameliorate the situation and eradicate preventable blindness and visual impairment in Kenya and in the world!

Co-creating a new model to change eye care in Africa with diverse stakeholders

Critical Issues for Achieving UHC

The decline of DALYs (disability-adjusted life years) due to blindness and visual impairment is almost the same lower level as those due to HIV/AIDs or cerebrovascular diseases. It ranks lowest among sensory organ diseases.

To achieve its UHC goals, WHO has made the promotion of blindness prevention one of its central mandates. To save the people from blindness will contribute significantly to achieve the SDGs' goal and to improve the people's lives and collective health.



Attaching a SEC to the camera part of a smartphone to diagnose the eye

New Models of Ophthalmic Care

Medical staff in medically underpopulated areas takes images of the eyes with a Smart Eye Camera (SEC) and send them to an ophthalmologist in an urban area. The ophthalmologist's diagnostic test result is sent back to the mobile phone.

Even staff with no experience in ophthalmology can easily use the system through a roughly 30-minutes online training session. So, by introducing SEC, you will be able to improve the skills of medical staff.



Online training connecting Kenya and Japan

Collaboration with others

African nations have common problems such as shortage of doctors and medical equipment or uneven distribution of doctors between urban areas and rural areas. To solve these problems, introducing telemedicine and Digital-Transformation with mobile phones and IoT are attracting attentions rapidly.

OUI Inc.'s projects in Kenya have been adopted by IFC's Tech Emerge Health East Africa, which is the project under the World Bank Group. OUI Inc. also collaborates with various agencies of the Japanese government such as JICA and AMED. Working with various stakeholders, we will continue pursuing social impact.



TechEmerge Health East Africa Innovation Summit discusses DXing Healthcare

Interview



Dr. Daniel Kiage
Kisii Eye Hospital

We at Kisii Eye Hospital are committed to solving Kenya's eye care challenges and are actively doing rural outreach, providing over 10,000 cataract surgeries per year to rural patients who have difficulty accessing eye care.

Since March 2021, we have been using OUI Inc.'s Smart Eye Camera for screening in rural areas and it has been very helpful. We hope to continue working with OUI Inc. to co-create a new model of eye diagnosis that will move eye care in Kenya forward.

Water purification technology improve people's lives and health

Products & Services Industry/Social Infrastructure

Providing safe water through systems tailored to local characteristics



In Kenya, where the shortage of water supply is a problem, the national average rate of water supply is 57% (WASREB/2019), and demand for water is also expected to increase in urban areas.

Addressing water issues, Mitsubishi Chemical Aqua Solutions Limited (MCAS) has implemented various projects in Kenya.

One of these is the introduction of membrane filtration technology in collaboration with Japan International Cooperation Agency (JICA). A water purification system designed for local water quality was installed in Ruiru, Kiambu County. Until then, heavy metals and other substances exceeding standard levels had been detected in the treated water at the water treatment plant, but by installing a membrane filtration system, the river water with high turbidity could be efficiently purified, and the supply of safe and delicious water began.

They also installed "slow filtration system" in communities with no piped water supply and no electricity. Water drawn from nearby canals is purified and supplied to local residents.

We practice our contribution to improving the health of local people through the provision of safe water.

Project Implementer: Mitsubishi Chemical Aqua Solutions Co., Ltd. | Support: JICA

Interview



Hiroko Fukushi

Oversea Business Support Dept., President's Office, Mitsubishi Chemical Aqua Solutions Co., Ltd.

Safe water is essential for healthy living, including cooking. It also benefits public health, including preventing the spread of infectious diseases.

By introducing water treatment systems with membrane filtration, designed to meet the needs of Kenya, to water treatment plants and hospitals, we can deliver safe water to many people.

And slow sand filtration system installed in rural communities have been supporting the health of local residents for more than nine years.

We hope to continue to propose and disseminate solutions centered on water treatment equipment tailored to local characteristics and water quality, and contribute to the healthy lives of people in Kenya and other parts of Africa through the provision of safe water.

Decentralized water treatment & supply system



This system can be installed in an area as large as a few cars. The system can be optimized for the type and nature of water sources as well as the use and supply amount.

Slow Sand Filtration system



Since no pumps are used, the system requires no electric power to operate and it is easy to manage by local people because maintenance is easy and low cost.

"Safe and clean water" combined with agriculture to improve local income and health

Equipped with remote monitoring system

MCAS's membrane-based water treatment and supply system is equipped with a remote monitoring system (WeLLDAS™) for monitoring from Japan.

Use measuring instruments and monitors to check differences in turbidity between wet and dry seasons. Accumulated data on the status of operations and responses to changes in water quality can be used to optimize maintenance and management.



Data from a plant in Kenya

Focusing on local technology transfer

We are transferring the technology to the local water corporation staff and the local staff of MCAS. Daily inspections and maintenance on site ensure a stable water supply.

Activated carbon used in slow filtration is also reused as a soil conditioner. We aim to use water efficiently, reduce waste generation, and establish a local system.



Maintenance at the site

Circulate business by Water&Agriculture

In collaboration with the United Nations Development Programme (UNDP), we developed a business model to sell treated water.

At the same time, we promote the cultivation of nutritious traditional vegetables in surrounding areas. With this revenue, we built a cycle of buying water.

In addition to achieving economic independence, it has reduced medical costs and created educational opportunities for local residents.



Local residents hold clean water in front of a "Slow Sand Filtration system"

Interview



Dominic Tumbo

A local coordinator

I have been working in all water treatment projects with MCAS as a local coordinator in Kenya since 2012.

I have received technical training on the plant maintenance from MCAS and have supported the local residents and WSP's engineers to conduct maintenance of the water treatment plants.

The residents in Ruiru who receive the membrane treated water once told me "We can now get cleaner and safer water that we can drink directly, more easily than before and we have also been able to save some time and money for boiling the water. Also, one lady in the village who uses water treated by MCAS's slow sand filtration plant said "I use water for drinking, cooking, washing and shower and I used to go to see the doctor often before, but now I rarely do. I am healthy!"

I am really proud of contributing to the improvement of water issues in my county through hearing these voices.

From Oita, Hometown Japan to Medical Care and Welfare in the Republic of Kenya

Human Resources Development

Industry/Social Infrastructure

Practicing Japanese-style meticulous medical care in Africa

In March 2013, the Limited Company "Grand Forest Japan Hospital" was registered with the Government of the Republic of Kenya. We opened a medical center in Nairobi City in order to provide the people of Kenya with meticulous medical services based on Japanese scientific evidence.

With the motto of "prompt and accurate diagnosis and treatment," we have steadily taken root in the local community and expanded our business by establishing a new rehabilitation center. While making use of our local experience and know-how, we continue to provide high quality medical services and expand and expand our business with the aim of perpetuating our activities in the future.

Apart from medical services, we also established a local NGO, Dream World Healthcare Programme, in January 2013. In collaboration with Nakuru and Kaziad county, the program provides monthly mobile healthcare services to maintain and improve health and quality of life, mainly in residential areas with high poverty rates.

Project Implementer: DREAM WORLD HELTHCARE PROGRAMME | Support: METI



Activities, Facility interior, Exterior

Introduction of Japanese medical equipment

Equipped with X-ray, CT scan, Ultrasound, gastrocamera, colonic camera, blood, urine and stool testing equipment.



As much as possible, we have installed Japanese-made medical equipment that is precise and has few failures. We provide Kenyan medical professionals who visit our facility with an opportunity to learn about Japanese medical equipment, which leads to purchases.

▲ Products of SHIMADZU CORPORATION "General X-ray system"

Interview



Dr. Mitsuo Takei

CEO and Founder,
GRAND FOREST JAPAN
HOSPITAL

Chairman,
DREAM WORLD
HEALTHCARE PROGRAMME

With economic growth in Kenya, the disease structure is changing and becoming more Westernized, especially in Nairobi City. As a result, lifestyle-related diseases are on the rise and the number of people with disabilities is increasing, as in Japan. In addition, there are few policies for children with disabilities. We are building a medical support system that takes these factors into account.

We are also focusing on human resource development. Good medical care, welfare, and healthcare require good human resources. Exchange between Japan and Kenya is mutually beneficial.

There are many challenges ahead, but we intend to move forward slowly, one at a time. I would be very happy if our activities can help Kenyans maintain and improve their health and become a cornerstone of the country's prosperity.

Providing quality medical care and thoughtful Japanese-style services

Operates a medical center

A total of 26,199 people have been treated at Forest Japan Medical Center. We also conduct health checks, which are rare in Kenya. In addition, the level of medical care in Japan is trusted, and after the MOU was concluded, we began to receive requests for tests from local medical facilities.

In the future, it is expected that needs from various fields will increase, and we are contributing to improving the quality of medical care in Kenya.



CT scan installed at the Medical Center

Opened a rehabilitation center

In November 2020, Forest Japan Rehabilitation Centre opened in Karen District, Nairobi Province. We offer Japanese-style rehabilitation in accordance with scientific evidence.

Although it was opened in the Corona Vortex, there are repeat patients. The center differentiates itself from rehabilitation centers in Kenya, where physical therapy is the mainstay of rehabilitation, and offers a wide range of rehabilitation services to help patients return to their daily lives.



Inside the rehabilitation center

Cooperation with Partner Countries

Our activities are in line with the policies of the Kenyan government and we have signed MOUs with provincial governments and educational institutions. We believe that by providing Japanese medical care and traveling clinic services, we can contribute to the health maintenance of Kenyan citizens, labor force improvement, and ultimately economic development.

Furthermore, since 2016, we have been conducting local training programs and building relationships of trust through the development of medical professionals. Through these activities, we also introduce Japanese culture, medical conditions, and equipment.



Kenyan doctors who attended training in Japan and Dr. Takei (photo on the right)

Interview



Dr. Kenneth O. Otieno

Manager,
Forest Japan Medical Centre

With the aim of protecting the precious lives of our patients, we strive every day to provide high-quality medical services to patients who visit our center. The smiles of our patients bring us joy, and by interacting with many patients, we gain valuable experience every day.

Continue and establish a training system through the guidance of physicians

Human Resources Development Products & Services Industry/Social Infrastructure

Early diagnosis and prevention of high-risk diseases during pregnancy

In Kenya, a country with one of the highest maternal mortality rates, JICA and FUJIFILM Corporation are collaborating to promote early diagnosis technology using ultrasound equipment called "Point of Care Ultrasound (POCUS)".

JICA and Fujifilm Corporation supported the establishment of the POCUS training center function at Kenyatta National Hospital in Nairobi. It was founded as a form of public-private partnership to promote the understanding of the importance and the concepts of "Point of Care (POC)" whose concepts are to perform examinations in front of patients or at home and to decide the treatment and to provide appropriate care.

In addition, a continuous and autonomous system was established through high quality images taken with the M-Turbo ultrasound system and programmed POCUS seminars by Japanese physicians. Nine physicians completed the curriculum over a two-year period beginning in 2020. Each of them is teaching other doctors as a trainer.

By improvement of the standard of medical care, we aim to reduce the maternal mortality rate by early diagnosis, identification of the diseases, and treatment of high-risk diseases during pregnancy, including complicated diseases.

Project Implementer: FUJIFILM Corporation | Support: JICA



▲ Dr. Minami Taro teaching POCUS to Kenyan physicians (Brown University, USA)

Portable Ultrasound System "SonoSite M-Turbo"



A compact, portable ultrasound diagnostic imaging system that pursues simple operability. Durable device that is stain-resistant, water-resistant, and resistant to shocks such as dropping. It can be used for a wide range of applications including abdominal, neurological, vascular, cardiac, vascular access, and superficial, contributing to improved quality and speed of diagnosis.

▲ Body weight including battery is about 3.4 kg

Interview



Michiba Hiroataka
Healthcare Business
Development Office,
FUJIFILM Corporation

The number of doctors in Kenya is gradually increasing, but still it is very low at about 0.2 per 1,000 population.

As a result, patients are often forced to wait over 3 to 4 hours for treatment in emergency outpatient clinic.

To ameliorate the situation, we aim to popularize the POCUS in Africa, which enables speedy and practical diagnosis, while maintaining the quality of medical care even in the absence of specialist physicians.

FUJIFILM Corporation will continue to do its utmost to contribute to the improvement of medical standards in Africa through "POCUS"!

Spreading POCUS, a cutting-edge medical technology, to Kenya

Instruction by a known globally doctor

The project trainer will be Dr. Taro Minami, a Japanese physician who is an associate professor (as of 2022) at Brown University in the United States.

The world's leading authority in the field of POCUS will follow up enthusiastically with each local doctor through on-site lectures and messaging applications.

We provide the world's highest level of technical guidance.



Dr. Minami giving a class directly to local doctors in Nairobi

Fostering Succession by Graduates

Doctors (including technicians) who complete the program's curriculum become trainers after graduation and pass on their POCUS knowledge and skills to healthcare professionals.

FUJIFILM and the Japanese project team, including Dr. Minami, are in continuous communication with the graduates to ensure that a sustainable and autonomous training system takes root locally.



Mr. Dennis Odhiambo Agolah
Radio-Sonographer

Mr. Dennis with his POCUS curriculum certificate of completion

Collaboration with the KOGS

The project has received strong sympathy and cooperation from the Kenya Obstetrics and Gynecology Society (KOGS) for its contribution to local healthcare and its activities.

In collaboration with KOGS, the project has been approved as a Continuing Professional Development (CPD) accreditation program, allowing Kenyan physicians to record what they have learned in this project as official knowledge and experience.



Dr. Kireki Omanwa
President, KOGS



KOGS Logo

Interview



Dr. Christine Mamai
Consultant Radiologist,
Kenyatta National Hospital (KNH)

POCUS is essential in many acute resuscitation processes, including Hypoxemia, Hypovolemia, Hemoperitoneum, Pneumothorax. Therefore, KNH attaches great importance to POCUS as the first treatment for patients in need of emergency care.

In fact, the knowledge and skills about POCUS acquired by trainees in this project are routinely used in KNH's clinical practice.