

## Provide Japanese knowledge and experience to regulators in the world

Human Resources Development

Industry/Social Infrastructure

### Contribute to regulatory harmonization and sharing valuable information for the development of regulatory infrastructure

Cooperation with overseas regulatory authorities is essential for the review, safety measures, and health suffers remedies from pharmaceuticals and medical devices that are developed, manufactured, and distributed across countries and regions. The Pharmaceuticals and Medical Devices Agency (PMDA) established the Asia Training Center for Pharmaceuticals and Medical Devices Regulatory Affairs (PMDA-ATC) in 2016 and has been providing Japanese knowledge and experience in pharmaceutical regulatory affairs to regulators in Asia and around the world in order to promote the establishment of a foundation for regulatory harmonization in each country through human resource development and capacity building.

PMDA-ATC conducts seminars by inviting those regulators to Japan for each training theme. In addition, PMDA-ATC also conducts on-site lectures, case studies, and implementation training focused on specific issues at the request of each regulator. From its establishment to FY2021, a total of 65 seminars have been held, with a total of 1,869 participants from 58 countries and regions.

Through these activities, the number of countries and regions that refer to the Japanese-style pharmaceutical regulatory system has increased. They are contributing to the harmonization of pharmaceutical regulations around the world.

Project Implementer: Pharmaceuticals and Medical Devices Agency (PMDA) | Support: MHLW



▲ Organize seminars in partner countries and Japan

#### Interview



**Junko Sato**  
Office Director,  
Office of  
International Programs  
PMDA

International standard guidelines can be obtained from the Internet, but we have also been providing the pharmaceutical regulators in each country not only introduction of the international standards, but also how Japan should coordinate with relevant parties, whether we have accepted and dealt with the situation.

We believe that by communicating not only what has been published in documents but also the points that Japan has struggled with, that will be easier for regulators to actually feel and recognize the regulatory system. And this will lead to make the foundation for each country to accept the Japanese regulatory system. When the document for this activity was finalized for use in each ASEAN country, at the ASEAN Health Ministers' Meeting, I was strongly reminded of the high evaluation of PMDA-ATC by each country.

## Contribution on the international regulatory harmonization of safety monitoring by providing the Japanese model

### Contribution to reform in the Philippines

Japan and the Philippines have taken frequent communication at bilateral meetings and seminars at the Asia Training Center for Pharmaceuticals and Medical Devices Regulatory Affairs (PMDA-ATC). Both countries have made efforts to address the ever-evolving pharmaceuticals and medical devices area.

Through these activities, the Japanese pharmaceutical regulatory system has been evaluated, and from May 2022, at the application in the Philippines for a drug approved in Japan, it will be allowed with a simplified review if the application is made within three years after the approval in Japan. This is expected to facilitate access to medicines developed in Japan and contribute to improving the quality of healthcare in the Philippines.



Food and Drug Administration (FDA), Philippines

### Facilitation on the regulatory response in India

Japanese and Indian pharmaceutical regulatory authorities hold bilateral meetings almost every year. In addition, they have deepened their understanding of pharmaceutical and medical devices regulations in both countries by providing training through PMDA-ATC on regulatory practices.

To apply for approval in India of a drug approved in Japan, an additional clinical trial in India had to be conducted. However, from March 2019, if a drug has been approved with conducting phase III clinical trials in Japan, it will be exempted from the clinical trials in India. Through various cooperative activities, they are contributing to improving the level of pharmaceutical and medical device regulations in India.



3rd India-Japan Medical Products Regulatory Symposium (August 27-28, 2018)

### Provision on training to ASEAN countries

PMDA has provided effective training, etc. according to their capabilities for review, inspection, etc. at PMDA-ATC through actively invited regulators, especially from Asian countries, to Japan or visited their countries.

As a result, PMDA-ATC was officially recognized as an APEC Training Center of Excellence in the field of medical devices. Furthermore, at the ASEAN Health Ministers' Meeting, it was agreed that the PMDA-ATC would be used for training of pharmaceutical regulatory officials in ASEAN countries. It is expected that this will deepen the understanding of Japanese pharmaceutical regulations and promote regulatory harmonization activities in ASEAN countries.



21st ASEAN-Japan Summit (November 4, 2018)

#### Interview



**Sitanun Poonpolsub**

Head, Office of  
International Affairs,  
Thai Food and Drug  
Administration (FDA)

The PMDA-ATC is very useful for the Thai Food and Drug Administration (FDA) officials to improve their regulatory capacity for drug and medical device review, benefit-risk assessment and post-market safety measures.

Thanks to PMDA for hosting the "PMDA-ATC Webinar", I was able to learn about the Japanese regulatory system and gain experience, including the knowledge of other authorities around the world.

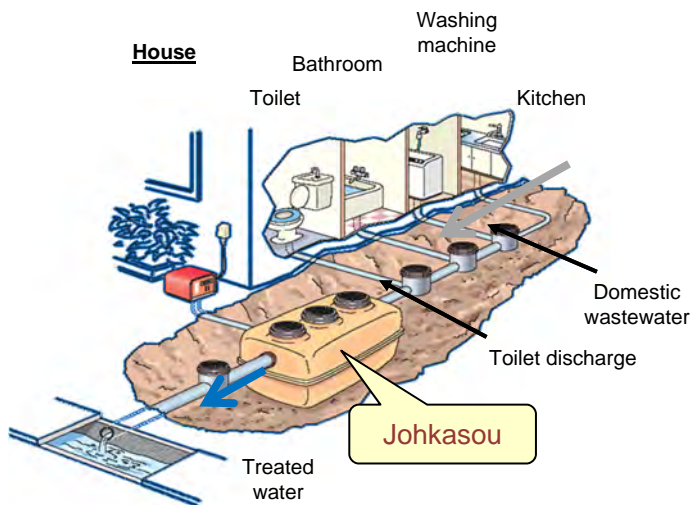
Although face-to-face training is not yet available, the webinars also provided practical knowledge and insightful information. I find webinars to be the most useful way to learn together with participants from other authorities.

# Promote "*Johkasou*" overseas through workshops & seminars

Human Resources Development

Industry/Social Infrastructure

## Introducing *Johkasou* to improve water and sanitation



In many developing countries, residential wastewater (toilet drainage, miscellaneous other than toilets, etc.) is discharged untreated. This causes sanitary conditions around residences deteriorate, and rivers, lakes, and seas are polluted.

Some of them have decentralized sewage treatment facilities called septic tanks, but their performance is not very good, and since they are applied only to toilet wastewater, other domestic wastewater is discharged without treatment, and both water and sanitation environments have not been sufficiently improved.

Therefore, in this project, held workshops and seminars for the governments of each country to discuss the soft aspects (legal system, etc.) and the hard aspects (technical and equipment, etc.) multidirectionally. Through the introduction of "*Johkasou*" that decompose the wastewater generated in daily life by the action of microorganisms and then discharge it, Ministry of the Environment, Government of Japan (MOE) is contributing to the improvement of both the water environment and sanitation environment in Asian countries.

Project Implementer: MOE




Officer,  
Environmental  
Protective Department  
Huzhou City, Zhejiang  
Province, China

First, the treatment performance is extremely high and stable. Secondly, with a small footprint and short piping on the site, "*Johkasou*" installation cost is affordable. Finally, the "*Johkasou*" is easy to maintain and the operation is very stable. Since the installation of "*Johkasou*," the water environment in rural areas has improved significantly.

## Achieving a hygienic living environment through the spread of Japan's proud decentralized domestic wastewater treatment facility "*Johkasou*"

### Workshops & Seminars

So far, workshops have been held in Thailand and Indonesia, Myanmar, Vietnam, and Japan. And seminars were also held in India, Cambodia, Sri Lanka, China, Vietnam, Myanmar, Laos, and other countries.

MOE is contributing to the improvement of water and sanitary environments at site by disseminating Japan's compact decentralized wastewater treatment facility, *Johkasou*, to the governments of Asian various countries and deepening their understanding.



Seminar held in Mandalay, Myanmar

### Efforts in Vietnam

In Vietnam, MOE hold workshops and seminars, and conduct field surveys. With this as an opportunity, they are currently working with the Ministry of Natural Resources and Environment of Vietnam to implement initiatives aimed at popularizing *Johkasou*.

MOE is conducting examinations of demonstration experiments, methods of performance evaluation, investigations to apply planning methods to Vietnam, and training for human resource development.



Field survey status in Vietnam

### Initiatives in India

A total of three seminars were held in India. Taking this opportunity, MOE signed a memorandum of cooperation with the Minister of Water Energy in the field of decentralized domestic wastewater management.

The content of the agreement is to promote cooperation on decentralized domestic wastewater management using *Johkasou*, and they are currently discussing specific details of activities.



The exchange of documents for this memorandum of cooperation took place at a meeting attended by Japanese Prime Minister Kishida and Prime Minister Modi of the Republic of India.

(Source: MOFA of Japan website)

## Improvement of Emergency and Trauma Treatment Skills through Personnel exchange

Human Resources Development Products & Services



▲ Surgeon exchange between India and Japan

### All India Institute of Medical Sciences (AIIMS) and Japanese academic societies collaborate to mutually develop human resources

In India, traffic accidents have been occurring at a high level every year in recent years. Approximately 150,000 people die in traffic accidents each year. Furthermore, the number of doctors in India is quite low, at 0.73 per 1,000 population. The training of doctors is an urgent issue.

The All India Institute of Medical Sciences (AIIMS), a national university and India's premier medical research institution, the Japanese Association for Acute Medicine, and the Japanese Association for The Surgery of Trauma collaborated on a project to promote communication between physicians in Japan and India to solve problems and improve medical technology in both countries.

Japanese doctors participated in actual surgeries and procedures at AIIMS and shared their knowledge and skills.

On the other hand, AIIMS doctors have experience in treatment technology (minimally invasive treatment) that reduces the burden on the patient's body using diagnostic imaging equipment and catheters in Japan. I received training centered on disaster medicine. In the future, we plan to share information such as "team medical care".

They will contribute to further improving the quality of medical care in both countries through not only treatment technology, but also through building medical systems for emergencies and disasters, and developing human resources.

Project Implementer: General Incorporated Association Medical Excellence JAPAN (MEJ) | Support: MHLW

#### Interview



**Yasumitsu Mizobata**

Japanese Association for Acute Medicine (JAAM), Board member, The Japanese Association for Surgery of Trauma (JAST), Professor, Osaka Metropolitan University

This project has been implemented by the Japanese Association for Acute Medicine and the Japanese Association for The Surgery of Trauma, which concluded an MOU with AIIMS.

We hope that this will be not only a mere exchange of personnel, but also academic research, information sharing on the latest emergency medical systems such as doctor helicopters, and future cooperation in medical technology for the development of emergency medicine in both Japan and India.

## Aiming to reduce mortality by improving surgical and emergency care skills and knowledge

### Collaborating on trauma surgery

Japanese doctors participated in trauma care at All India Institute of Medical Sciences (AIIMS) and experienced differences in medical facilities, resuscitation methods, and medical systems.

Physicians from both Japan and India are contributing to the development of human resources and systems for emergency medicine and trauma treatment in both countries by mutually sharing trauma treatment techniques and instruments.



Japanese Doctors participate in surgery at AIIMS Trauma Center in India

### Teaching Japan's advanced system

Six doctors from India, including AIIMS President and Professor Guleria, were invited to Japan for the signing of the MOU and an introduction to emergency medical facilities and trauma treatment sites.

In order to implement effective treatment, we made them aware of the necessity of establishing a medical system and improving facilities, as well as developing laws and investing in medical resources, which will be important in the future.



Observation of Hybrid ER System at Osaka General Medical Center

### Expanding from India to ASEAN

This project was funded by the Economic Research Institute for ASEAN and East Asia (ERIA).

Through collaboration with ERIA, which is also expected to strengthen cooperation in the "Asian Health Initiative" promoted by the Health and Medical Strategy Office of the Cabinet Secretariat in Japan, it is hoped that the project will lead to an improvement in the level of medical care in ASEAN as a whole.



Training Scenery

# Providing Comfort to Homebound Patients through Japanese-Style Home Healthcare

Human Resources Development | Products & Services

## Providing home healthcare tailored to needs with local people



▲ Indian Home Healthcare Staff

In India, with a population of over 1.3 billion, the number of single-person households of elderly people has been on the rise in recent years due to the aging of the population and the increase in nuclear families in metropolitan areas. Furthermore, due to the Corona disaster, many people are avoiding hospitals, and interest in telemedicine and home healthcare is growing.

Human Life Management Inc. (HLM), which provides operational support for home healthcare clinics in Japan, launched a collaborative business in June 2021 with Care24, which provides home visitation services and a matching platform for patients and caregivers for home healthcare and home care in India. They have been developing the provision of Japanese-style home healthcare services in collaboration with visiting nurses in metropolitan areas such as Delhi and Mumbai.

Furthermore, in addition to the current Care24 service, HLM is also promoting technology transfer of methodologies for efficient medical management of home patients, utilizing telemedicine provided by the YUSHOUKAI MEDICAL CORPORATION, which is supported by HLM.

Through the spread of home medical services in India and the provision of integrated medical, nursing, and care services, HLM is contributing to improving the quality of medical and nursing care in India.

Project Implementer: Human Life Management Inc. / YUSHOUKAI MEDICAL CORPORATION | Support: METI

### Cloud-based electronic medical record "homis"



© Human Life Management

An electronic medical record developed by HLM that specializes in home medical care for patient diagnosis and treatment 24 hours a day, 365 days a year. It has excellent efficiency, operability, and functionality, and you can safely enter medical charts, view medical information, and create

documents at any time, as long as you have an environment where you can connect to the Internet. This project aims to provide unique services in combination with Care24's existing system.

### Interview



Yoriko Matsumoto

Senior Associate,  
Program Management  
Office of HLM

We are very honored to work together with Care24 in India to develop a new market of home medical care business for their future aging society upon our expertise and experience in Japanese aged society for over last 15yrs.

Home health care system and operation in Japan has been grown based on the government insurance system matured, on the other hand there has been also new movement of home health care business in the private sector among Asian countries. Mixed up with our front line knowledge from experience in this sector and their insight of the ideal future based on the trial spirit, we believe to create a innovative and valuable service for the people in coming adding/aged society all over the world.

## Improving the quality of home healthcare through "team medicine" in which medical care, nursing care, and nursing cooperate with each other

### Disseminate Japanese-style services

Yushoukai Medical Corporation was in charge of training Indian doctors and supporting trial medical care.

Japanese-style home medical care is characterized by holistic care that provides total support for the patient's life by offering so-called "team medical care" in cooperation with nursing care and nursing, in addition to medical care.

The plan was to invite local doctors and nurses to Japan and have them observe Japanese-style home medical care on site, but due to the Corona disaster, they used a video of the home-visit treatment with English subtitles as teaching materials.



Scenes of training by Japanese doctors

### To the DX of Home Healthcare

Human Life Management Inc. is planning to introduce a digital stethoscope, tablet-compatible electronic medical records, and a nursing planning support system to home health care in India. Their goal is to support caregivers and nurses who visit patients' homes directly.

This business model, in which physicians who are in charge of telemedicine and on-site staff work together, provides peace of mind to both elderly patients and physicians, who may have difficulty dealing with telemedicine. This will also reduce the burden of hospital visits and hospitalization costs.



Promoting Digitalization of Home Healthcare

### To establish IT-based systems

Elderly people have chronic diseases that cannot be cured completely, and hospital visits and hospitalization are a heavy burden on both the patients themselves and their families.

Home medical care is expected to be enhanced to enable stable recuperation at home, reduce the number of hospitalization days, and ease the burden on the younger generation of workers. In preparation for the future aging of India's population, they are contributing to the realization of efficient home medical care by providing Japanese-style team medicine and multidisciplinary cooperation, and by building a system that utilizes IT.



IT operations staff for Team Health Care

### Interview



Vipin Patek  
CEO and Founder,  
Care24

Care24 is leading home healthcare in India serving 700+ patients/day helping patients recover at comfort of their home. HLM played important role in enhancing the Care24's Home healthcare. The Japan team is implementing :  
1. Training of Doctors, 2. Critical Patient's Monitoring at Home under supervision, 3. Doctor visit at Home, 4. Care24 to tie-up with largest Insurance providers to offer Homecare covered under insurance for the first time in India, 5. Opening doors in multiple countries including Thailand, Vietnam, and Indonesia to form strategic relation to expand Care24.

We are certain of increased value in future by increase in bilateral relation between partners.

# Providing young amblyopia in India with the opportunity to receive early treatment

Human Resources Development Products & Services

## Providing amblyopia treatment that is enjoyable and reduces patient burden

Amblyopia is a childhood condition in which the vision in one or both eyes does not develop properly. It is particularly prevalent in India, occurring in approximately three percent of all births and affecting approximately 550,000 people each year.

The most common amblyopia treatment in India has been occlusion therapy, where the healthy eye is covered by a patch. However, wearing an eye patch hampers daily life, with many children experiencing mental stress when wearing it to school. The expense of buying eye patches has also prevented the treatment from taking root.

In light of this, the project provides a new treatment using a special tablet device called Occlu-tab. The tablet screen is processed so that it is only visible to the amblyopic eye. The amblyopic eye is treated by playing a dedicated game for an hour a day while wearing polarized glasses. As both eyes are open and the child can enjoy the focused training, clinical studies held in Japan and India have shown that it produces results quicker than occlusion therapy and has a higher patient adherence rate.

The project aims to establish a local business and contribute to India's eye disease eradication plan.

Project Implementer: YAGUCHI ELECTRIC CORPORATION | Support: JICA



▲ Children using "Occlu-tab"

### Tablet-type training device "Occlu-tab"



Occlu-tab is a tablet-type vision function training device that provides enjoyable amblyopia treatment using tablet games. Registered as a medical device in Japan, it's been introduced at many eye clinics and hospitals and supports visual function development.



(From left)  
Tangible block/Right-eye correction glasses  
/Left-eye correction glasses /Instructor glasses

### Interview



#### Yo Ishigaki

Director,  
Yaguchi Electric Corporation,  
Associate Professor,  
Specially Appointed,  
University  
of Electro-Communications

The Occlu-tab is a medical device jointly developed by Yaguchi Electric Corporation, Kitasato University, and the University of Electro-Communications. As eye-hand coordination strongly stimulates the brain, the Occlu-tab is equipped with various touch-operated games, including whack-a-mole, a sheep-shearing game, and an egg-carrying game.

With JICA's support, we are holding clinical studies of this new medical device and working to export it. Yaguchi Electric Corporation aims "To establish an ideal factory that stresses a spirit of freedom and open-mindedness," create devices that benefit society, and contribute to the improvement of India's medical care.

## Help children with amblyopia improve their symptoms and prevent their loss of opportunities to learn and work

### Improving visual acuity

Recovery from amblyopia is said to be difficult unless treatment begins by age eight and is continuous and completed in a short period.

Because children with amblyopia often have difficulty reading letters on classroom boards, they're sometimes mistaken for having low learning capabilities. They may also face drawbacks at entrance examinations solely because of their visual impairment.

Amblyopia treatment contributes to increased study and work opportunities.

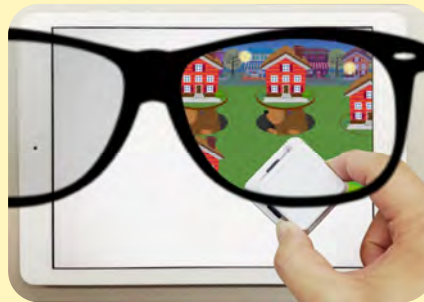


Treatment of the amblyopic eye is performed with both eyes open.

### Development based on local

Field studies conducted together with medical experts from Japan's Kitasato University led to the development of a medical device that can provide vision screening in rural districts without medical checkup systems.

Through JICA's SDGs business, large-scale clinical studies were held at fifteen hospitals in India. Development continues based on local feedback.



The screen appears a blank white to the naked eye. Game images appear when wearing special glasses.

### Lending the training device

The Occlu-tab has eight types of games installed. It can also be operated with an electronic stamp (tangible block), making it accessible to children who have difficulty with touch panels.

Civil Hospital Ahmedabad has lent the training device to ten principal hospitals and nearby clinics for local ophthalmologists to test its treatment efficacy. Their use of the device has started leading to the dissemination of the training device.



Playing whack-a-mole using a tangible block.

### Interview



#### Hansa Thakkar

Ophthalmologist,  
Civil Hospital  
Ahmedabad,  
Gujarat State

India has a high birthrate and, consequently, an extremely high number of amblyopia patients. However, in India's high-temperature regions, eye patches are uncomfortable and come with the risk of skin inflammation, causing many to not follow through on treatment.

Games, on the other hand, hold the children's interest. And playing games effectively stimulates the brain's visual center. In this sense, the Occlu-tab can be said to be a very effective medical device.

Healthy longevity through early detection and early treatment of diseases by health screening

Human Resources Development

Products & Services

Industry/Social Infrastructure

Promoting the spread and settlement of "health screening," a culture born in Japan



▲ NURA health screening center opened in Bengaluru in 2021

NURA health screening center



▲ NURA staff welcomes visitors with Japanese hospitality

Equipped with state-of-the-art medical equipment such as CT and mammography, and a medical IT system that utilizes AI technology, the facility offers Japanese-style, high-quality health screening services in a comfortable space with sophisticated design. You can take the test in about 120 minutes, and you can receive an explanation of the results from the doctor on the spot.

Interview



**Masaharu Morita**  
Global Head for New Business, Medical DIV, FUJIFILM Corporation (Japan)

When I was stationed overseas, I realized that there were no "sufficient health screenings for everyone" like in Japan, and this was the trigger for me to establish the health screening center "NURA".  
"I can go back to Japan temporarily and get medical screenings, but my local colleagues and their families who work with me cannot get medical screenings... Isn't it possible to create a state-of-the-art medical screening center overseas?"  
In order to realize this goal, I have pushed forward together with many colleagues who share the same aspirations, including not only the company but also overseas partner companies, doctors, and staff working at NURA. We will continue to contribute to the health promotion of people around the world with a strong will!

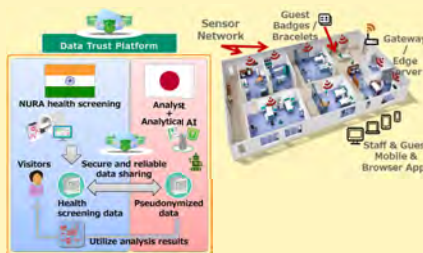
Project Implementer: FUJIFILM Corporation | Support: JETRO

Contribute to solving social issues through the use of digital technology, such as the utilization of health screening data

Safely retain and utilize data

Utilizing digital technology, a system was introduced that allows examinees to check diagnosis results anytime via smartphone, and a flow to reduce the waiting time for each examination by managing the progress of each examinee's examination with a wristband with a QR code. As a result, smooth provision of medical screening services was realized.

In addition, Fujifilm have built a system to anonymize acquired data and ensure reliability (data trust). They are also testing a system that uses AI technology to analyze health screening data and provide feedback to examinees.



Functional Image of Health Screening Data Infrastructure

Networks in major cities

To make health screenings a part of their culture, it is important to develop and continue to provide this health screening service throughout India.

Fujifilm opened NURA in the southern city of Bengaluru in February 2021. Starting with that, in July of the following year, 2022, the company created a base in Gurugram, a city demonstrating rapid economic development, located near the capital Delhi. And in September of the same year, the company added a base in Mumbai, a commercial center and India's largest city. They plan to continue expanding the NURA network further.



Opening ceremony of the new NURA in Gurugram with Indian Ambassador Mr. Suzuki (center) and President of FUJIFILM Corporation Mr. Goto (left)

Infiltrate preventive medicine

NURA in Bengaluru, the first branch, has conducted medical screenings for approximately 4,000 people since its opening in February 2021. About 4% of the examinees, or 160 people, have been detected to be at risk of serious myocardial infarction in advance, and have been linked to treatment.

In the future, the Indian government is expected to focus on and promote preventive medicine on a nationwide basis. Fujifilm will take the lead in promoting the wonderful Japanese culture of health screenings in India. Furthermore, they will contribute to the formation of preventive medicine in cooperation with companies, insurance companies, and neighboring doctors.



NURA is equipped with state-of-the-art equipment manufactured by FUJIFILM

Interview



**Dr. Mohamed Kasim**  
Executive Director, Dr. Kutty's Healthcare (DKH)  
Vice president, Board Director, FUJIFILM DKH (NURA)

This initiative is one of its kind and the response is promising from customers who have NURA experience. We are trying to establish this health check culture in India. Many people are aware of the importance of this, but it takes a lot of effort to make it a part of the culture. However, we will continue to pursue this challenge while having fun.

## Supporting India's medical development through specimen quality control and transportation infrastructure

Human Resources Development

### Providing Japanese-style control technology and know-how

The need for medical care and clinical testing for middle- and low-income groups are expanding in India due to the country's rapid population growth. However, there are challenges in specimen quality control and transportation infrastructure, which greatly affect the accuracy of clinical testing.

To address this issue, Konoike Transport Co., Ltd., together with J-VPD INC. has been sending Japanese physicians and experts working in clinical testing to India since 2017. In addition to holding symposium-style discussions, they have also developed specimen quality control and transportation infrastructure through the exchange of human resources and technology, including training for Indian medical professionals. They shared with Indian medical professionals the characteristics of Japanese-style clinical test items, accuracy control technology, and know-how. They also held a workshop, "Medical Camp" for local doctors and local residents. Through the hands-on experience of allergen testing, they raised awareness about the importance of preventive medicine.

In response to the Indian government's plan to develop a system for comprehensive diagnosis and treatment after the new coronavirus has been contained, J-VPD has established a Japanese-style testing laboratory and a pathology testing laboratory in collaboration with a local partner.

J-VPD will contribute to the development of medical care in India through early detection of diseases and the improvement of various testing environments.

Project Implementer: Konoike Transport Co., Ltd. / J-VPD INC. | Support: NCGM

### International standard "Pharmaceutical Traceability System"



An original system developed from the perspective of a logistics company has made it possible to transport advanced medical products, specimens, etc., including pharmaceuticals. Real-time location management, temperature management, operation routes, and issuance of temperature certificate records at delivery destinations are possible for each actual product.

\*Jointly developed with Toppan Forms Co., Ltd. and AKASAKATEC INC.

### Interview



#### Ayushi Vats

Laboratory Staff,  
J-VPD India Pvt. Ltd.

I work as a laboratory staff and a Japanese interpreter at J-VPD's Indian subsidiary. I hope to make use of my work experience at a Japanese company to understand Japanese clinical testing technology and corporate culture, and to contribute to the development of medical care in India as a mediator for medical technology exchanges between Japan and India.

In the future, we plan to participate in technical training programs in Japan. Japan has a track record of maintaining high health indicators, including being one of the countries with the longest life expectancy in the world, and I am very much looking forward to learning about Japanese-style clinical laboratories from the physicians, technicians, and staff involved in clinical laboratories in Japan.

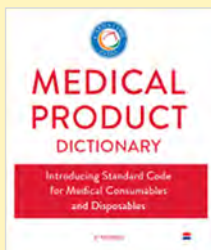
As a member of the staff who manages the comprehensive testing laboratory that is planned to be opened in India, I will make use of my past achievements and the results of my training in Japan to facilitate smooth collaboration with medical professionals in Japan and India. I would like to continue to provide support while fulfilling my role. Thank you all for your support.

## Providing comprehensive support for the development of medical care in India by harnessing Japanese technology

### Promoting the creation of a database

Konoike established a medical-related subsidiary in India in 2013 as a joint venture, and developed a medical materials database covering more than 49,000 items from about 200 manufacturers. In addition, they have created a dictionary that visualizes these items. The database is distributed to approximately 8,000 hospitals throughout India.

Furthermore, they have promoted the creation of a database of 54,000 hospitals and more than 85,000 physicians. By combining this information, they will support the development of India's medical information infrastructure and the expansion of Japanese medical companies into India.



Medical Database  
of Medical Products

Produced by Carna Medical Database Pvt. Ltd.

### Strengthening cooperation with local

Through our database business, Konoike have built good relationships not only with Japanese and Indian medical product manufacturers, but also with local hospitals, doctors, and medical organizations. With the support of the governments of Japan and India, they have also actively participated in various on-site surveys and technical personnel exchange programs.

They will continue to contribute to the development of medical care in India with unique solutions that they can offer because they have closely observed the trends in the Indian healthcare industry.



Recognized by the Delhi Medical Association  
for their contributions to Indian medical care

Produced by Carna Medical Database Pvt. Ltd.

### Next-Generation Medical Center

Konoike are promoting the "Next Generation Medical Center Concept," which aims to improve both the quality and efficiency of medical care, implementing the technology and know-how they have cultivated in Japan for sterilization services inside and outside hospitals and logistics services in India.

With the cooperation of the Cabinet Secretariat's Health & Medical Care Strategy Office and JICA, they are conducting research activities in Chennai, Tamil Nadu, toward the realization of this concept.



In-Hospital in Japan  
Medical Products  
Management  
Services

▲ Out-of-hospital  
in Japan  
Sterilization Services



Produced by Konoike Transport Co., Ltd.

### Interview



#### Prabhjot Kaur

Project Manager,  
Carna Medical  
Database. Pvt. Ltd.

We are developing research and consulting services based on database business activities in order to introduce unique and groundbreaking medical products from Japan to the Indian market. In August 2021, we obtained permission to sell medical products and foods, and now we can also provide import, storage, and sales services for medical equipment, pharmaceuticals, and health foods from Japan.

By supporting the introduction of medical technology and services from Japan and the Konoike Group into India, we strongly hope to create innovative solutions for the development of medical care in India.

## Establish a system to increase the number of professionals

Human Resources Development

Industry/Social Infrastructure

### Contribute to a better understanding of children's mental health



▲ Scene of a lecture

The Philippines has a high percentage of the young generation, with those under the age of 14 accounting for 37% of the country's population. Children's mental health is now an important issue in the country, as the Mental Health Act was enacted in 2019 and mental disorders are now covered by national health insurance.

Further, while 16% of children have some kind of mental illness, inpatient facilities for adolescent children are inadequate, accounting for only 2% of the total. In this context, the Department of Child and Adolescent Psychiatry, Kohnodai Hospital, National Center for Global Health and Medicine (NCGM), has been collaborating with the Philippine Society for Child and Adolescent Psychiatry, Philippine Psychiatric Association, Philippine Mental Health Association, Philippine General Hospital, and National Center for Mental Health, and others.

They held workshops on community mental health related to diagnostic skills, pharmacotherapy, psychosocial therapy, and disaster psychiatry for mental illnesses specific to adolescent children, including autism.

The project is particularly focused on "shortening the time from onset to consultation," which is a key factor in whether patients can return to society after developing a mental illness, thereby contributing to improving the medical treatment capability in the Philippines.

Project Implementer: National Center for Global Health and Medicine (NCGM) | Support: MHLW

#### "in-Country training" (transmission training)



Training program in Manila, Philippines

In order to solve the shortage of specialized medical personnel, this project is also working on creating a system for "in-Country training" (transmission training) in which people who have undergone training become trainers in cooperation with local academic societies.

#### Interview



#### Masahide Usami

Department Chief of Child and Adolescent Psychiatry, Kohnodai Hospital, National Center for Global Health and Medicine.

Through this project, in 2017 we conducted a training program on the theme of mental health of children in the disaster-stricken areas of the Philippines, and in 2019, we conducted activities related to mental health care for children in both countries. The aim was to share information through discussion and to build a multi-professional network related to child care, such as medical care, health care, and education, between the two countries. Since 2020, we have been conducting training on improving the mental health of children affected by COVID-19.

Also, the shortage of child psychiatrists is a common problem in the world, and I would like to make efforts to develop them.

## Bringing smiles to children's faces through the creation of online learning opportunities

#### Both countries learn together

NCGM held Workshops for doctors, psychologists, social workers, nurses, public health nurses, and other healthcare professionals on the care of mental illness in adolescent children and COVID-19 countermeasures in general.

The online workshop enabled participation by a large number of healthcare professionals, which contributed to a better understanding of mental health.



Lecture scene in Japan

#### Cooperation with academic

Their collaboration with the Philippine Society for Child and Adolescent Psychiatry to provide learning opportunities using on-demand educational materials has led to the early treatment of mental illnesses in children.

NCGM also visited facilities related to children's mental health in the Philippines and Japan. Japanese experts presented the recommendations that had been made in the form of a paper.

(Estrada et al., 2020, Usami et al., 2018) (Usami, 2019)



Visited a child guidance facility in the Philippines

#### Expansion to Southeast Asia

Improving medical treatment capabilities for adolescent children's mental health in the Philippines will lead to appropriate assessment and therapeutic intervention for the rapidly increasing number of mental illnesses among children, as well as consideration for the rights of patients.

NCGM will continue to further promote this project, aiming to expand it to each Southeast Asian country.



Training on mental health conducted at a high school in the Philippines

#### Interview



#### Ernesto R. Gregorio, Jr.

Associate Professor  
Department of Health Promotion and Education,  
College of Public Health,  
University of the Philippines Manila

Child mental health is a major issue in the Philippines. Currently, there is a shortage of not only professionals such as doctors, nurses, psychologists and social workers, but also teachers who can support these issues, especially in rural areas. We believe it is important to work with other global partners (SDG17) to train more medical professionals.

Our collaboration with NCGM over the last few years has allowed us to organize a large-scale training session in the Philippines. Also, I was able to observe some facilities and good practices in Japan, so I would like to make use of them in my efforts in the Philippines.



Contributing to the improvement of chest X-ray image diagnostic skills through the online training

Human Resources Development Products & Services Industry/Social Infrastructure

For early detection of respiratory infectious diseases (e.g. tuberculosis and new coronavirus infections)



▲ Ultrasound Imaging Practice in Japan

Respiratory infectious diseases are presently the second biggest cause of death in the Philippines. Although chest X-rays, initial diagnostic imaging exams, are widespread in the Philippines, chest CT scans, a more detailed image diagnostic exams, are much less than chest X-rays. For this reason, improving the diagnostic accuracy of chest X-ray exams is essential for medical staff at primary healthcare in the Philippines.

Medical staff in the Philippines must attend training courses and obtain a designated number of continuing professional development credit units every three years for their license renewal. Still, the disparity between cities and rural areas in the number of training courses held and the quality of their content has been a problem.

To tackle the situation, a project was launched to improve the diagnostic accuracy of chest X-ray exams in the Philippines by utilising the online chest X-ray interpretation training tool "Dokuei Shinan (Diagnostic Imaging Tutor)" developed by the NPO Medical Shinansha.

The University of Healthcare Management in Fukuoka Prefecture has led the project, with the participation of Osaka Metropolitan University, which was involved in the development of "Dokuei Shinan (Diagnostic Imaging Tutor)". Kyushu University, Hiroshima International University and FUJIFILM Corporation organized the workshops and trainings for better understanding the target of the project. The project is expected to contribute to improving the quality of imaging and diagnosis of respiratory diseases in the Philippines.

Project Implementer: College of Healthcare Management | Support: MHLW

Online Diagnostic Imaging Knowledge Service "Diagnostic Imaging Tutor"

It consists of two types of learning software: "simu.Doc," a diagnostic imaging simulator, and "Doc.navi," a diagnostic imaging navigator.



"simu.Doc" helps users to self-check their diagnostic competency and improve their diagnostic ability, while "Doc.navi" assists diagnosis through preparation of medical records and explanation materials for patients. Under the supervision of specialty doctors and supervisory doctors, the program provides an online learning system complete with knowledge and experiences necessary for image diagnosis.

Interview



**Maria Cristina A. Marañon**

Respiratory specialist, Philippine College of Chest Physicians (PCCP), Asst Prof, University of Santo Tomas Department of Internal Medicine

We attended lectures on the education system for radiological technologists at Kyushu University and Hiroshima International University, and for medical doctors at Osaka Metropolitan University. After that, we had a chance to experience IT-based educational tools and Fujifilm's diagnostic imaging support system. In addition, I was able to deepen my understanding of the chest image diagnosis support tool, the "Diagnostic Imaging Tutor", which was the main purpose of this training.

After returning to the Philippines, I not only explained the content of this training to the executives of the College of Chest Physicians, but also reported it to the members of the society at the annual meeting. We will continue our efforts to deepen the understanding of the members about the "Diagnostic Imaging Tutor" to improve the quality of chest imaging diagnostic skills in the future.

For better healthcare quality through hybrid training program

Use plans are prepared locally

Thanks to the long running cooperation of The Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association for the fight against tuberculosis in the Philippines, the project started in collaboration as following six organizations: the Philippine Department of Health (Tuberculosis Control Division), the Manila City Health Department, Gat Andres Bonifacio Memorial Medical Center (GABMMC), the Philippine College of Radiology (PCR), the Philippine College of Chest Physicians (PCCP), and the Philippine Association of Radiologic Technologist (PART).

According to the project targets, discussions were held with above six organizations and prepared their plans how they can improve the situation.

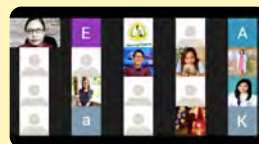


Project started with hands-on training for "Diagnostic Imaging Tutor"

Approved one after another

PCCP organized online training sessions for three times, attended by 117 doctors. At the same time, department of radiology in GABMMC has organized 3-time workshops for ten radiological technologists in face.

As a result, the potential of "Diagnostic Imaging Tutor" was highly appreciated by the participants. PCCP and GABMMC are preparing to open new login accounts for their members. The online program is expected to be as a training tool for medical staff before and after their graduation.



Online lectures and training Sessions implemented by PCCP

Lectures and training for the radiological technologists at the department of radiology in GABMMC



The online English manual is available

To increase the users of "Diagnostic Imaging Tutor", the NPO Medical Shinansha opened an English online site and uploaded the video manual for the users not only in the Philippines but also in Southeast Asian countries.

The NPO Medical Shinansha is flexible to be accommodative to the local circumstances such as license contract. While taking local feedback, they will further improve the "Diagnostic Imaging Tutor", that will strengthen the diagnostic imaging skills of the primary healthcare medical staff in the Philippines.



English video manual of "Diagnostic Imaging Tutor" is available on the official site

Interview



**Cherokee R. Ritual**

Radiology specialist, Philippine College of Radiology (PCR), Dept. of Radiology, Gat Andres Bonifacio Memorial Medical Center

We conducted training on "simu.Doc" for radiological technologists in the hospital. They would be able to understand the basic cases of chest X-ray and medical terminology. We expect this training will not only be effective as a post-graduate education but also enhance their ability to assist medical doctors. In addition, it would be beneficial as training for undergraduates.

And the advanced course, among multiple elective courses, would contribute to improving the doctors' chest X-ray interpretation for correct diagnosis. We would like to consider continuing the training, though it requires extending a contract, nonetheless not easy.

## Contributing to healthy living through improving public health

Human Resources Development

Industry/Social Infrastructure



▲ Lecture scene at a training session on waste



▲ Environmental dialogue on waste management

### Various support based on Japan's experience and technology

In order to contribute to the realization of healthy lifestyles through the improvement of public health, Ministry of the Environment, Government of Japan (MOE) support the improvement of urban waste management in the Philippines.

Specifically, workshops on Waste to Energy technology and business schemes, etc., and training on waste management and recycling technologies and systems in Japan are held to promote environmental improvement in the Philippines. MOE is also promoting the introduction of Japanese-style waste-to-energy technology.

Furthermore, since October 2015, MOE has held an annual environmental dialogue on waste management between MOE and the Philippines' Department of Environment and Natural Resources, contributing to the realization of a sanitary living environment.

Program Implementer: MOE

#### Interview



#### Ministry of the Environment

Office for Promotion of Sound Material-Cycle Society, Policy and Coordination Division, Environmental Regeneration and Material Cycles Bureau

Along with economic and population growth, the amount of waste generated is increasing on a global scale and the quality of the waste is diversifying, making appropriate waste treatment a global issue. This trend is conspicuous in developing countries, including those in Asia, where economic growth is remarkable. In addition to the rapid increase and diversification of waste, the waste treatment system is underdeveloped and immature, and there are concerns about environmental pollution caused by improper waste treatment.

On the other hand, Japan's material-cycle industry has been improving technology related to waste treatment and recycling in order to respond to social demands related to waste treatment and recycling and has advanced technologies.

We will contribute to the improvement of local public health by incorporating technical and institutional knowledge related to waste management and recycling in Japan.

## Contributing to the Expansion of the Waste Management Systems and Human Resource Development

### The Importance of Separation

As in Japan, waste is collected at stations in the Philippines, but sorting waste by type has become an issue.

In the Philippines, separation for proper disposal began around the 1970s. In this program, MOE is promoting local efforts to spread the message that cooperation between municipalities and citizens is essential to promote separation, such as by introducing the history of Japan's careful efforts to educate citizens.



Lecture on collection and separation

### Waste to Energy Facility

A tour of the facility was conducted with the aim of deepening understanding of the outline of the Waste to Energy facility and the roles played by the national government and municipalities necessary for the introduction.

Participants commented that the facility would be useful in reducing the volume of waste, and actively engaged in discussions regarding the formation of consensus among the residents near the construction site.



Tour of Waste to Energy facility

### The importance of 3Rs

Currently, the Philippines is facing a tight capacity of landfill sites for waste disposal.

In this program, lectures, etc. were held to raise awareness of the importance of the 3Rs (Reduce, Reuse, and Recycle) of waste.

The program raising awareness of the need for efforts to reduce waste throughout society is contributing to the development of human resources for the implementation of the 3Rs.



Scene at a lecture on the 3Rs

#### Interview



Department of Environment and Natural Resources, Republic of the Philippines

In the Philippines, waste collection efficiency is poor, and there are cases where waste is dumped into rivers. In addition, since there is a shortage of landfill sites, the government is currently focusing on educational activities to promote the 3Rs.

We expect that the Waste to Energy facility will make it possible to reduce the volume of waste and contribute greatly to solving the problem of tight capacity at landfill sites. In introducing the facility, we would like to utilize the Public Private Partnership (PPP) scheme to consider efficient projects with the participation of the private sector.

# Japanese-style team medicine contributes to early recovery from stroke

Products & Services

## Dissemination of multifaceted post-stroke care



▲ First "Swallowing Videofluorography (VF)" being performed at a public hospital in Vietnam (December 23, 2021).

### Swallowing Videofluorography (VF)

As one of NCGM's technical support, NCGM held a web training session for the purpose of practical technology transfer. As a result, they were able to carry out 5 cases of "Swallowing Videofluorography (VF)" for the first time in a public hospital in Vietnam.



This test involves eating a meal containing a contrast medium such as barium under X-ray fluoroscopy to evaluate the process and condition of swallowing. And spread to other facilities, continuous development is expected.

▲ Barium jelly prepared by staff of BMH Rehabilitation Center

In Vietnam, the lifestyle has changed in recent years due to remarkable economic development. As a result, non-communicable diseases (NCDs) now account for approximately 70% of deaths. Among NCDs, the most common cause of death is stroke, with approximately 100,000 deaths per year, and overcoming this problem has become a critical issue. For stroke patients, systematic and integrated diagnosis and treatment through multidisciplinary cooperation immediately after hospitalization are important.

Therefore, since 2015, the National Center for Global Medical Research (NCGM) has provided support for the introduction of team medicine at Bac Mai Hospital (BMH), in which the Vietnamese Ministry of Health takes part. In November 2020, when BMH established a stroke center, NCGM received a request for technical assistance and have provided the following support.

- (1) Establishment of a database covering all surgical cases (especially cerebral aneurysms and cerebral arteriovenous malformations)
- (2) Formulation, approval, and operation of bedside swallowing screening evaluation
- (3) Implementation of early rehabilitation (rehabilitation)
- (4) Introduction of "therapeutic swallowing foods" using thickening agents to make swallowing easier
- (5) Support for the development of stroke patient nursing training plans for new nurses

In FY2022, they held case study meetings for stroke patients, rehabilitation hands-on seminars, supported the creation of treatment and nursing texts, and assisted in the creation of pathological nursing-related charts. They are contributing to the strengthening of team medicine while seeking together the optimal medical treatment, rehabilitation, and nursing care suited to the Vietnamese situation.

Project Implementer & Support: NCGM

### Interview



**Dr. Tetsuo Hara**

MD, PhD,  
Deputy Director,  
NCGM Hospital and Director,  
Stroke Center

With a history of more than 100 years, BMH is one of the top national hospitals in Vietnam with advanced medical care, education and research. It also has a strong relationship with the Ministry of Health and has an influence throughout Vietnam. However, until now, stroke care at BMH has not functioned well from the perspective of team medical care.

Therefore, our major goal was to strengthen cooperation among related departments and create a model case for stroke treatment in Vietnam. Fortunately, with the warm support of the BMH executives, a multidisciplinary team involving medical treatment, nursing, rehabilitation, pharmacy, and nutrition, was able to achieve many results in a short period of time.

In addition, BMH is actively disseminating information to regional hospitals and I feel that the density of medical care is increasing day by day. The team will continue to support the creation of a system for meticulous follow-up of stroke patients.

## Contributing to the improvement of the quality of stroke treatment, rehabilitation, and nursing care

### Stroke Treatment Textbooks

In 2022, NCGM Center Hospital conducted a consultation on a Vietnamese stroke care text written by BMH and Hanoi Medical University, based on the findings of previous support, and the text was published in Vietnam.

In addition, BMH and the neurosurgery and neurology departments of the NCGM Center Hospital jointly hold monthly case review meetings for stroke patients, and the NCGM Center Hospital made a presentation at an international conference held in Vietnam in November. Through these activities, they are contributing to the improvement and standardization of stroke care in Vietnam.



(Above left) Published textbook on stroke treatment  
(Bottom left & Right) Case study meeting

### Live Hands-on Seminar

The Rehabilitation Department of NCGM Center Hospital has supported the "Early Stroke Rehabilitation Training Seminar" organized by the BMH Rehabilitation Center since FY2020.

In FY2022, they held a web seminar and provided training on rehabilitation methods for patients with memory impairment due to stroke, as well as how to create rehabilitation braces for patients with paralysis.

By using real-time lectures and videos, participants were able to practice rehabilitation exercises and orthosis making on the spot, and were enthusiastic and engaged in a lively question-and-answer session.

The project contributes to the dissemination of new techniques in stroke rehabilitation.



Hands-on training sessions held in real time

### Pathophysiological Diagrams

From the viewpoint of strengthening team medical care, NCGM shared the "Stroke Medical Evaluation Index" common to physicians, nurses, and rehabilitation.

The goal is to monitor patients and detect abnormalities early. To achieve this, it is essential to improve the skills of nurses and this was a new initiative for the Vietnamese nurses.

They also supports the creation of "pathophysiology diagram," which show the relationship between the pathophysiology of patients and the nursing care they need. The diagram has been incorporated into the education of new nurses at BMH, contributing to the improvement of the quality of nursing care.



Education of nurses using the "Pathophysiology Chart"



Workshop on Stroke Team Medicine

### Interview



**Assoc. Prof. Mai Duy Ton**  
M.D., Ph.D.  
Director of  
Stroke Center,  
Bach Mai Hospital (BMH)

Established in 2020, the Stroke Center at Bach Mai Hospital sees more than 12,000 patients annually. Cooperation with NCGM through this project has been very meaningful. In terms of nursing care, it has been useful in screening for swallowing disorders in stroke patients and in preventing aspiration pneumonia. In addition, through collaboration with rehabilitation centers and nutrition centers, early rehabilitation and nutritional management within 24 hours for stroke patients are now being implemented. Through these activities, we believe that we have contributed to improving the satisfaction of, the quality of medical services, and reducing complications in stroke patients. We look forward to continued support from the NCGM for technology transfer, human resource development, and preparation of nursing textbooks to improve the quality of stroke care.



# Contribution to the Smooth Mobility of the Elderly and the Disabled

Human Resources Development Products & Services

## Developing a "mechanical device that allows vertical movement while sitting" for chairs and wheelchairs

Vietnam has entered an aging society with an elderly population ratio of 7%\* in 2017 and is expected to reach 14% by 2034. Furthermore, the percentage of the young population (ages 0-14) has started to decline in recent years, and the rapid aging population combined with the diminishing number of children has become a problem. In addition, due to the impact of the Vietnam War and conflicts in the border areas in the past, the number of people in need of war is about 6.2 million (2016/UNICEF), which is more than 796 of the population aged 2 and over. There is a demand for "barrier-free" that overcome the physical hurdles to employment.

Therefore, since 2019, SYNTEX Co., Ltd. has been conducting demonstration activities for welfare equipment, that is developed, designed, manufactured, and sold in-house through a JICA support project. From both the technical and institutional perspectives, they have confirmed local adaptability of the equipment.

In the future, they will improve the quality of life (QOL) of the elderly and people with disabilities and contribute to their employment by promoting the use of "Chair type stairlift" and "Wheelchair lift" in public facilities, public spaces, and other living spaces.

\*Based on the World Health Organization (WHO) 's definition of elderly persons as people aged 65 or older.

Project Implementer: SYNTEX Co., Ltd. | Support: JICA



▲ Children using the "Chair type stairlift" at the Hospital of Orthopedics & Functional Rehabilitation Hanoi

### Chair-type Stairlifts



There are two types of products for curved and straight stairs, which can be installed both indoors and outdoors. They can be kept folded.

### Wheelchair lifts



Four types of products are available, which can cover steps ranging from 65cm to 240cm. The products are designed for easy operation by one person.

### Interview



#### Minoru Yagisawa

President, Syntex Co., Ltd.

SYNTEX utilizes precision sheet metal processing and machine design technology to develop, design, manufacture, and sell "Chair-type Stairlifts" and "Wheelchair lifts" mainly in Japan, including mechanical sheet-metal processing for medical equipment, etc.

We started our activities in Vietnam in 2019. We have actively hired Vietnamese engineers and interpreters to contribute to job creation. In the near future, we plan to establish a local subsidiary and factory, as well as hire new employees.

Through this project and our products, we would like to continue contributing to the realization of a society where no one is left behind in terms of employment and mobility.

## Promotion of Barrier-Free Access in Public Facilities, Public Spaces, and Living Spaces

### Safe installation, Smooth operation

Through this project, it was confirmed that sufficient accessibility is not yet secured in public facilities and public spaces, which are used by elderly persons and disabled persons, as well.

Toward the safe installation and smooth introduction of "chair-type stairlifts" and "wheelchair lifts," SYNTEX sorted out building-related laws and regulations to be introduced and made policy proposals to the Vietnamese government agencies.



Explaining how to use the "Chair type stairlift" through an interpreter.

### Various public facilities Barrier-free

As a result of the demonstration at Hospital of Orthopedics & Functional Rehabilitation Hanoi and Hanoi Station, their products were highly evaluated for their operability and ride quality.

It was also pointed out by parties concerned, including wheelchair users, that barrier-free access at public facilities, such as city halls and hospitals, and learning/employment facilities, would be required to ensure the convenience and safety of mobility and facility utilization.



A station attendant tries out a "Wheelchair lift" installed at Hanoi Railway Station.

### Cooperation with MOLISA

In 2004, Vietnam established the National Committee on Ageing. In February 2015, it signed the Convention on the Rights of Persons with Disabilities (CRPD). The country has been working on various policies by setting up a national committee for the disabled.

SYNTEX will continue to cooperate with Vietnam's Ministry of Labour War Invalids and Social Affairs (MOLISA), Ministry of Construction, local governments, housing developers, etc., not only for public facilities and public spaces, but also for including private houses through the popularization of "Chair type stairlift" and "Wheelchair lift" in living spaces, they will promote the smooth movement of the elderly and people with disabilities.



At the Thuy An Rehabilitation Centre for People with Disabilities

### Interview



#### NGUYEN VAN HUNG

Director, Hospital of Orthopedics & Functional Rehabilitation Hanoi, Ministry of Labour - Invalids and Social Affairs

Thanks to the cooperation between JICA and MOLISA, SYNTEX product was installed in our hospital. For investigating of users' needs of the product, I am very grateful that the product was installed and conducted the demonstration. It was so useful to improve accessibility in the facility no elevator.

In Vietnam, not only public facilities but also private houses are required to be barrier-free. This product is not yet widely recognized in Vietnam, so I would like many people to know about it in the future.

When I participated in this project in 2019, I was convinced that producing these products in Vietnam would reduce costs and create jobs. We would like to continue to cooperate with SYNTEX to provide this product to more elderly people and people with disabilities.

Providing Japanese-style medical care to improve the quality of healthcare in a new city

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

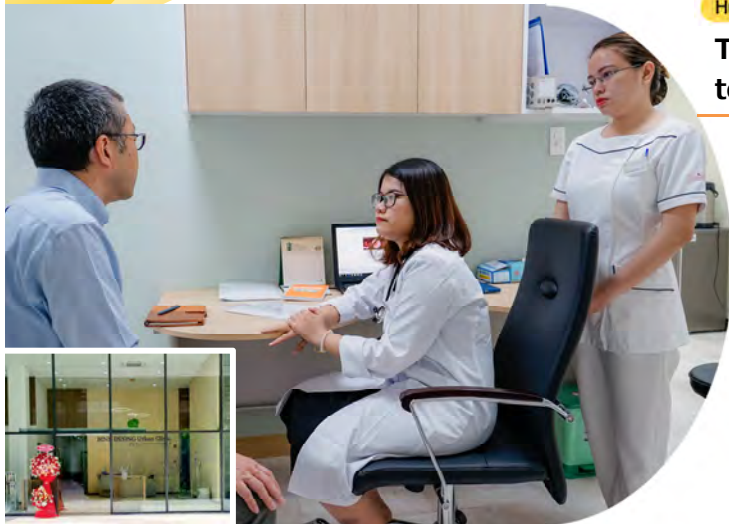
The first medical institution in Binh Duong New City to provide comprehensive medical care

Binh Duong, with a population of approximately 2.7 million, is located adjacent to the northern part of Ho Chi Minh City, Vietnam, and continues to develop as the largest industrial district in Vietnam. BECAMEX TOKYU, a joint venture between BECAMEX IDC CORPORATION, a Vietnamese public corporation, and TOKYU CORPORATION, a Japanese company, is promoting a new urban development project called " Binh Duong New City Project" that combines local culture and customs with "Japanese style".

Within this project, MEDIVA Inc. conducted a survey of the medical environment in the Binh Duong New City in 2017 with the support of Japan's Ministry of Economy, Trade and Industry. Subsequently, MEDIVA Vietnam, a local subsidiary, was established in September 2018 and opened an internal medicine clinic, " Binh Duong Urban Clinic," in February 2019. They provide "detailed" medical care, a characteristic of "Japanese-style" medical care, to all people.

They will continue to contribute to the improvement of the quality of local healthcare by establishing healthcare services not bound by existing concepts, according to the development stage of the city.

Project Implementer: MEDIVA Inc. | Support: METI



▲ Exterior view of "BINH DUONG Urban Clinic" / Examination view

Health checkups utilizing X-ray vehicles



Leveraging mobile X-ray vehicles to provide health check-ups for companies located in industrial parks around Binh Duong New City. In the future, in collaboration with Vietnam's Bach Mai Hospital, MEDIVA Inc. aim to establish a new health checkup center using the Japanese model.

Interview



**Akihiro Ogura**  
Manager,  
Mediva Inc.

Based on the philosophy of "Medical Innovation and Value-Added (MEDIVA)", which is the meaning of the company name of MEDIVA, our company has opened a large number of medical facilities in Japan. and consulting.

Nevertheless, in this project, there were many difficulties that I had never experienced in the past. We often had a hard time even procuring equipment. As for staff training, I struggled with differences in culture and customs. While carefully overcoming various difficulties one by one, we will continue to promote activities so that we can continue to provide good services.

A community where people can live with peace of mind through "detailed" services

Provides primary care

MEDIVA Inc. provide initial medical care for fever, sore throat, abdominal pain, etc. for people living in Binh Duong New City and working in the surrounding industrial complexes.

In addition to ongoing treatment for chronic diseases such as hypertension and diabetes, they also collaborate with a nearby general hospital depending on the severity and urgency of the situation.

Even in developing cities, they provide a place where people can feel free to consult with us about their physical health.



A patient being examined at the "BINH DUONG Urban Clinic"

Measures against COVID-19

For the new coronavirus, which began to spread after the opening of the clinic, they provide referrals to designated hospitals in the area and PCR testing, as well as various vaccinations for hepatitis, tetanus, and other diseases.

The clinic is available in three languages: Japanese, English, and Vietnamese. In the future, in collaboration with the government, they plan to provide a comprehensive system in health, medicine, and welfare in conjunction with the development of Binh Duong New City.



Scene on the day of grand opening

Contribute to the community

MEDIVA Inc. signed a memorandum of cooperation with Bach Mai Hospital, one of the largest national hospitals in Vietnam.

Based on the development status of Binh Duong New City, MEDIVA plans to establish a medical checkup center and a hospital with multiple departments to ensure everyone can receive appropriate medical services.

By deepening the cooperative relationship with Bach Mai Hospital, they aim to contribute to the promotion of health checkups and the extension of healthy life expectancy in the northern region.



Aiming to create a safe and comfortable living environment in Binh Duong New City

Interview



**Rika Sakai**  
Director,  
Commercial Dept,  
Strategy Group,  
BECAMEX TOKYU CO.,

Since its opening, it has supported the medical care of Binh Duong New City "Tokyu Garden City" where many foreigners live. During the COVID-19 pandemic, we asked our employees to undergo regular antigen tests and cooperated in the early detection and prevention of the spread of positive cases.

I myself had just moved to Vietnam and had a lot of anxiety, but the detailed service, such as being able to make inquiries immediately on LINE, was very helpful. It seems that I will be able to help you in the future, such as additional vaccinations for influenza and travel vaccines, and food poisoning.



# Promoting digital transformation (DX) for clinics in Southeast Asia

Human Resources Development

Products & Services

Industry/Social Infrastructure

## Efficient operation of clinics and community healthcare



▲ METIC Ha Dong Clinic, a smart clinic opened in Vietnam

Vietnam has a rapidly growing economy and a growing population. However the medical system has not changed much from the past, and although there are local clinics, Patients continue to be concentrated in large hospitals in cities. As a result, waiting times for medical examinations and surgeries are long, and even in cases of lifestyle-related diseases that require early detection and early treatment, many patients seek medical attention only after their condition becomes severe. This has become a social issue.

MEDRING Co., Ltd. (MEDRING) has opened a state-of-the-art smart clinic in Vietnam that utilizes medical AI. In addition, they support the operation of clinics in a franchise format, and promote digital transformation (DX) locally.

Utilizing Japanese-style operations, data, AI, telemedicine, etc., MEDRING is contributing to improving the level of medical care, improving patient satisfaction, and increasing the number of patients they handle. In addition, in cooperation with local governments, we aim to create a system that promotes expansion into areas with low earnings contribution, such as medical care in remote areas.

Project Implementer: MEDRING Co., Ltd. | Support: Japan External Trade Organization (JETRO)

### Cloud electronic medical record "MEDI"



▲ TOP screen of MEDI

Developed for clinics in Southeast Asia, the cloud-based electronic medical record "MEDI" was designed with an emphasis on the perspective of medical professionals who actually use it. It adopts the international standard HL7, and has specifications that enable data linkage between other countries.

### Interview



**Kazuma Abe**  
Founder and CEO,  
MEDRING Co., Ltd.

We feel that it is very important to improve the medical situation in Southeast Asia and contribute to the realization of "Universal Health Coverage," so we decided to provide Japanese-style operations and systems to clinics and aim for improvement. My father died suddenly of a heart attack at the young age of 30.

I believe that if clinics can treat many patients regardless of their region or income, they will be able to catch and treat signs of serious illness. With the ultimate goal of "eradicating sudden death from the world," we will continue to make steady progress.

## Realization of utilization of medical AI and telemedicine from Japan through DX

### Improve medicine & satisfaction

In this project, introduced Japanese-style operations ( hygiene management, hospitality, etc. ) and the electronic medical record system "MEDI" to clinics in Southeast Asia that were using paper medical records. By utilizing appropriate medical treatment based on data, AI, and telemedicine, they are improving the quality of medical care and patient satisfaction.

In addition, MEDRING is also support global telemedicine that connects Japanese doctors online and medical tourism to Japan, contributing to efficient clinic operations.



Global telemedicine in collaboration with Japanese doctor

### Contribute to access to healthcare

Problems with patients and mistakes during treatment greatly reduce the productivity of clinics and place a heavy burden on patients.

By introducing the electronic medical record "MEDI," they have reduced problems and mistakes, worked to increase the number of patients we can handle per day, and contributed to improved access to medical care.

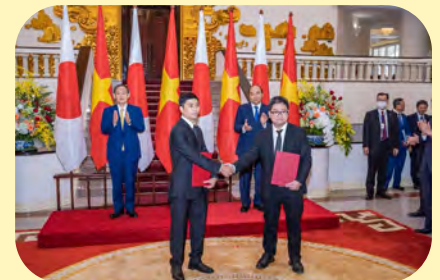


Smart clinic opened in Hanoi, Vietnam

### Collaborate with other institutions

The Vietnamese government has a sense of crisis about issues related to clinics. MEDRING will promote the establishment of a "referral system" to refer patients from clinics to large hospitals, as well as DX for medical institutions.

In this project, they received support from the Japanese government such as the Japanese Ministry of Economy, Trade and Industry and JETRO. We also signed an MOU with a local partner company. They are working to improve the quality of medical care in Vietnam.



MOU with a local partner company in front of the then prime ministers of Japan and Vietnam

### Interview



**Dr. Bui Thi Hong Van**  
Physician  
(Internal Medicine)

The use of electronic medical records "MEDI" allows doctors to set follow-up observations, search for necessary information it's history of patients examined and treated, and reduce handwriting time. It has brought great convenience, such as reducing mistakes when creating medical instructions.

From there, this leads to more time for doctors to consult with patients and relatives.



▲ Operation screen of MEDI

# Early detection of hearing loss and appropriate prescriptions to improve quality of life

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

## Aiming to increase the number of people receiving hearing tests and improve hearing test/diagnostic technology



▲ Testing at a hearing screening center of Ministry of Health Hue Central Hospital

There are approximately 1 million hearing-impaired people in Vietnam (1.2% of the national population). About 40% of them are young people between the ages of 5 and 7 years old. Hearing impaired persons can receive appropriate support, such as hearing aid prescriptions, if they are detected at an early stage. This can lead to the acquisition of the language and communication means necessary for social life.

RION Co., Ltd. (RION), visited the region in 2014. Hearing test equipment is not widely available in Vietnam. Many people have never had a hearing test. In addition, hearing loss is not properly diagnosed and prescribed. In response to this situation, they started activities in Vietnam with the aim of solving this problem. Since 2016, they have established a HEARING TEST CENTER in collaboration with the National Bac Mai Hospital located in Hanoi, Vietnam and, since 2018, with the National Hue Central Hospital in Hue City, Vietnam. At the same time, they provide Japanese hearing test equipment and digital hearing aids for early detection and subsequent prescription of hearing loss.

Furthermore, they are striving to train otolaryngologists and other medical professionals as well as personnel to adjust hearing aids. To date, they have invited 30 doctors and nurses to Japanese medical institutions for training, and have contributed to the improvement of testing and diagnostic technology in Vietnam.

Project Implementer: RION Co., Ltd. | Support: NCGM

### Rionet Hearing Instruments



In Vietnam, behind-the-ear hearing aids are the mainstream, a type that can be linked to a smartphone and is available on the market. And the framework that allows to conduct from hearing tests to trials in hospitals.

The hearing aids are equipped with a unique engine that allows the user to hear the sounds of everyday life in a natural way. It's an easy-to-use, compact type with a memory switching button. There are total of nine colors, and its stylish design has been well received.

### Interview



**Tadayuki Watabe**

Senior Sales Manager  
Medical Instruments,  
RION CO.,LTD.

During a visit to Bac Mai Hospital in 2015, we saw that even the top national hospitals lacked adequate equipment. Hue Central Hospital had equipment in place, but it was not being used due to maintenance issues.

However, since the opening of the hearing test center in 2016, the number of patients receiving the test has been increasing. We will promote activities with a view to further expanding the center to neighboring facilities and to preventive health checkups.

In the future, we hope to contribute to the establishment of guidelines for health checkups at each event such as childbirth and school entrance, as is done in Japan.

## Promotes exchange among physicians and generates employment for Vietnamese

### Increased number of tests

In 2016, RION's hearing test equipment was installed at the National Bac Mai Hospital in Hanoi. Since then, the number of tests has increased more than 2.5 times, from about 4,000 before the introduction (2015) to about 11,000 before the outbreak of covid-19 infection (2019).

This is thought to be due to the increase in the number of tests items from two to five. The results of these tests have led to more appropriate diagnosis.



The first "Eustachian tube function testing meter"



Newborn Hearing Screening

### Diffusion of fitting technology

Hearing aids do not immediately help people to hear well, and are strongly dependent on the living environment of each patient who uses them.

In this project, local staff who know the Vietnamese lifestyle well provide counseling, adjustments, and fitting hearing aids under the guidance of RION's experts.

After-sales maintenance is also important, so RION staff members are in regular contact with local staff to check the patient's usage situation.



Local staff fitting and adjusting hearing aids



### Exchange of doctors & Training

The training was conducted in Japan with the aim of introducing the latest Japanese medical technology and utilizing related medical devices. In 2016, RION's project was selected for JICA's Private Sector Technology Dissemination Promotion Project, and in 2019, it was selected for Japan's MHLW's Project for the Promotion of International Development of Medical Technology.

RION played a facilitating role in these projects and conducted long-term training at facilities such as Nara Medical University and the National Center for Global Health and Medicine (NCGM). Before the Corona Disaster, Japanese doctors gave lectures in Vietnam, and many doctors and students participated in these lectures.



▲Right: Dr. Tayama, NCGM



Left: Hue Central Hospital's doctor received training

### Interview



**Dr. LÊ QUỐC ANH**

Master, Physician,  
Ministry of Health  
Hue Central Hospital

I received training at NCGM in Japan for about 40 days in 2020. I had received training in other countries before, but it was mainly classroom training. But the training in Japan gave me many opportunities to actually see clinical practice. What was particularly impressive to me was the way examinations and surgeries. This was immediately adopted at our hospital.

And the equipment used at NCGM was introduced so that we could perform hearing and Eustachian tube tests. Now, all newborns born here can be tested. We will continue to work with RION and other Japanese partners to improve our technology.



# The kit keeps the mother and newborn clean and contributes to a safe and secure delivery

Human Resources Development

Products & Services



▲ Cesarean section kit trial at Tu Du Hospital, Vietnam

## Introducing disposable kits into operating rooms to promote infection prevention

One of the recent issues in the medical field in Vietnam is the improvement of the sanitary environment, including infection control. In Japan, doctors and midwives wear medical garments (surgical gowns, drapes, etc.) made of medical non-woven fabrics with different functions, such as water repellency, waterproofing, water absorption, heat retention, and static electricity resistance, depending on the purpose. It is also common practice to use disposable kits for maternity clothes and supplies. However, disposable kits are not yet common in Vietnam.

In this project, Daiei Corporation, a Japanese company that manufactures and sells maternity and medical supplies, conducted a demonstration project with the support of JICA. In cooperation with the Department of Maternal and Child Health of the Vietnamese Ministry of Health, "Packaged Delivery sets" were introduced to five public hospitals. The aim of the project is to promote the use of disposable delivery kits while confirming their usefulness and superiority.

The kit includes medical non-woven products, disposable medical devices, and other items for use during delivery by both the health care provider and the birthing mother. Daiei provided training on their use and infection control measures. We are contributing to the realization of safe and secure deliveries in Vietnam.

Project Implementer: Daiei Co., Ltd. | Support: JICA

### Packaged Delivery sets



It can make custom-made packages of medical materials necessary for calcination treatment, such as calcination sheets, surgical gowns, medical gauze, suction tubes, needles, and leg band clamps.

High quality and low cost are realized by making them into kits.

▲ Soft pink color also provides a sense of security for maternity women

### Interview



#### Masaru Kato

Manager (at that time), Dissemination and Demonstration Project, Daiei Co., Ltd.

Doctors at large hospitals in Vietnam often study abroad in France, Japan, etc. and understood the standard of medical care in those countries, so there was little need to explain in detail the necessity of these products when talking with doctors.

On the other hand, it was necessary for the medical staff involved in the hospital to carefully permeate the necessity of changing the conventional way of doing things, and it was very difficult to find such an educational place and instruction method.

We would like to continue contributing to the development of medical care in Vietnam through our local subsidiary.

## High-quality, low-cost kits tailored to Vietnamese medical practice

### Improved according to local needs

Daiei conducted a field survey at a hospital in Vietnam and improved the contents of the kit according to the structure of the delivery table and the cesarean section technique. The contents of the kit can also be changed according to the characteristics of the medical facility, which is expected to promote the introduction of disposable products.

In addition, a warm color (pink), which makes the parasympathetic nervous system dominant, is used for the material. This helps to relax muscles, relieve labor pains, and reduce anxiety and tension in the birthing mother.

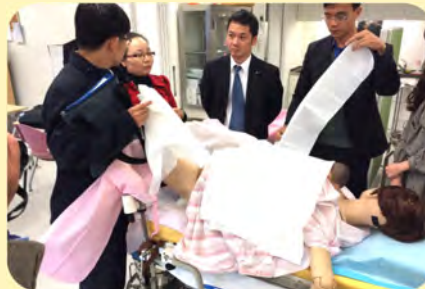


View of the deployment of a kit for vaginal delivery

### Provided as a set with training

On the occasion of the introduction of disposable delivery kits, Daiei held training sessions on infection control measures in both countries. The training included lectures on the proper use of the kit, the "ATP wipe test (A3 method)" to confirm hand washing, and an overview of infection control measures, as well as training on hospitality to improve patient satisfaction.

Through these training programs, they raise the awareness of healthcare professionals regarding infection control measures and contribute to improving the quality of services related to "safety" and "comfort".



Training in Japan

### Support in case of emergency

In February 2020, during the Corona disaster, hospitals in Vietnam and Japan were facing a shortage of medical masks. At the time, Daiei's warehouse had a small inventory of non-woven fabrics for surgical gowns and drapes. Although these non-woven fabrics are not for masks, they are high-quality materials with enhanced barrier properties similar to surgical masks.

Daiei immediately cut this raw material into mask-sized pieces and provided 1,200 masks to a hospital in Vietnam that had been complaining of a mask shortage. Since the performance of the non-woven fabric had been sufficiently confirmed, the masks were produced in the hospital at the director's discretion and used at the actual surgical site.



Hospital handmade masks

Used for cesarean section surgery







# Aiming to promote perinatal care services for safe and secure childbirth

Products & Services

## To improve medical services through support for medical technology and hospital operations

Since 2018, KISHOKAI MEDICAL CORPORATION, a Japanese medical corporation, has started a project to deliver safe and secure childbirth in cooperation with Phuong Chau International Hospital, a private general hospital (mainly for obstetrics and gynecology) in Can Tho City, southwestern Vietnam. With the aim of introducing and spreading perinatal medical services, the project provides medical staff of the hospital with medical technical guidance related to pregnancy, delivery, and the neonatal period, respectively.

The medical staff were divided into obstetricians, midwives, and pediatricians (neonates), and on-the-job training (OJT) was continuously conducted in clinical settings to (1) strengthen monitoring and emergency response by interpreting cardiocotography charts (CTG) during delivery, (2) standardize C-sections, and (3) improve neonatal resuscitation skills.

In addition, they continue to support the hospital's operations to deliver perinatal care services to as many pregnant women as possible. KISHOKAI provides guidance, advice, and other support as the hospital staff takes the initiative in promoting public relations, event planning and management, sharing marketing and branding concepts and skills, and contributing to improving the quality of perinatal care in Vietnam through activities in collaboration with local staff.

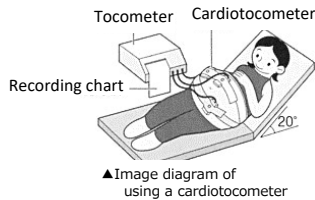
Project Implementer: KISHOKAI MEDICAL CORPORATION | Support: METI



( photo above ) With the director of Phuong Chau International Hospital  
( photo below ) Scene of the delivery management and neonatal resuscitation training session

### Cardiotocography (CTG)

Utilizing CTG, which records the heartbeat and uterine contraction of the fetus using a heart rate monitoring device, if the fetal heart rate indicates that the fetal condition is in danger, the fetus can be delivered immediately by Cesarean section or other means.



### Interview



**Tomoya Hiroswawa**

M.D., Ph.D.  
Kishokai Medical Corporation  
Medical Specialist, JSOG

Since 2018, I have been visiting Phuong Chau International Hospital for about a week every month. The hospital is one of the top hospitals in the country according to the hospital function evaluation ranking of the Ministry of Health of Vietnam, and has already provided highly rated medical care to expectant and nursing mothers. However, we are working in response to the hospital's desire to further improve its level by incorporating medical care that is being developed in Japan.

There are various barriers, such as language, culture, and differences in education received, and it is not easy to correctly convey intentions or encourage behavior change, but I find it rewarding to be making progress, little by little, through careful communication and building a relationship of trust.

## Supporting childbirth by integrating Japanese perinatal care with Vietnamese medical culture

### Practice of Perinatal Medicine

Through two years of medical technology instruction, KISHOKAI were able to significantly improve overall CTG interpretation skills. In addition, as a result of reviewing and standardizing the criteria for applying C-sections, the C-section rate, which initially exceeded 70%, was reduced to approximately 57% by the end of 2019. Careful explanations based on medical evidence and meticulous nursing care practice for each pregnant woman has also contributed to increased patient satisfaction and an increase in the number of deliveries.



Confirmation of medical details at the hospital.

### Patient Centered care for Pregnant Women

Phuong Chau International Hospital has always aimed to provide patient-centered medical services with a smile on the faces of all staff members. The hospital aims for further improvement and, through collaboration with KISHOKAI, is working to practice and establish care that is attentive to each pregnant woman, utilizing the spirit of Japanese "Omotenashi" (hospitality).

The hospital's unique Phuong Chau style of nursing care and KISHOKAI's culture are fused together to promote a new type of "hospitality" care that is suited to the Vietnamese cultural background.



Foot bath to relieve birth pains were well-received by the mothers.

### Collaboration in Nationwide Expansion

Phuong Chau International Hospital has operated three hospitals so far, mainly in the Mekong Delta region of southwestern Vietnam, and plans to further expand its operations in the region. In addition, a new hospital will open in Ho Chi Minh City at the end of 2022. After that, they plan to expand their operations to Hanoi, Da Nang, and other areas in the region.

KISHOKAI will continue to collaborate with the hospital in its expansion throughout Vietnam, supporting the hospital's operations while contributing to the spread and establishment of perinatal care services.



The main hospital of Can Tho, Phuong Chau International Hospital

### Interview



**Dr. Nguyễn Duy Linh**

Chief Medical Officer,  
Phuong Chau  
International Hospital

Many people in Vietnam have a favorable impression of Japanese products and services. There are high expectations for Japanese-style medical services in the medical field, and they are popular with patients. Since 2018, we have collaborated with KISHOKAI to provide obstetric care at Phuong Chau International Hospital. There are many things to learn, and I feel that the satisfaction level of pregnant women has also increased.

We will open a new hospital in Ho Chi Minh City at the end of 2022. With the support of KISHOKAI, we believe we can provide high-quality medical services there.



# Development of "HFNC," which aims to improve ICU mortality

Products & Services



## Low-Cost Ventilators Contribute to Health Care in Vietnam

Hospitals in Vietnam have issues such as inadequate ventilator maintenance management and nosocomial infection control. In a Vietnamese hospital I visited previously, maintenance management of ventilators was not being carried out properly, and I felt uneasy.

As a countermeasure, a "low-cost" and "easy-to-manage" respiratory support system is required. It is desirable that the cost of purchases and running is low in order to use ventilators under hospital control.

Therefore, in this project, Metran Co.,Ltd. developed a ventilator needed by the medical field in Vietnam by using the bio-design development method for medical devices.

The ventilator employs HFNC (High Flow Nasal Cannula), a new type of oxygen therapy that administers heated and humidified oxygen of a constant concentration through the nose at a high flow rate. While inhaling high concentrations of oxygen, patients are able to maintain their quality of life, such as speaking and eating. And the goal is to reduce the mortality rate in the ICU.

Project implementer: Metran Co.,Ltd. | Support: MHLW

▲ The ICU in Vietnam, where there are many issues to be solved

### "HFNC Ventilators" manufactured at local factories



An HFNC respirator that uses multiple new technologies in an effort to solve the challenges facing medical professionals in Vietnam.

The equipment will be produced at Metran's Vietnam plant and supplied worldwide.

### Interview



**Shinichi Nakane**  
Deputy Chairperson,  
Metran Co.,Ltd.

Metran Co.,Ltd., whose founder is from Vietnam, has built a deep connection with Vietnam for 40 years and aims to contribute to the "Quality of Life" of the Vietnamese people by improving the level of medical care in Vietnam.

In addition, many of the ventilators for medical practice in Vietnam match the home care needs in Japan, and we aim to export the ventilators developed using the biodesign method from Vietnam to markets around the world, including Japan.

## Promoting disease control through proper oral care program

Human Resources Development

Products & Services

Industry/Social Infrastructure

### To develop human resource capable of proper use of antimicrobial agents

Antimicrobial resistance (AMR) is a global threat and has been an issue in developed and developing countries alike. For this reason, quality improvement of Health care-associated infection (HAI) and Infection Prevention and Control (IPC), development of antimicrobial stewardship program (ASP) are in need.

Indonesia has high numbers of respirator-related pneumonia both in terms of cases and their death rate, and one of the reasons for this reality is poor oral hygiene.

To tackle this, Japan National Center for Global Health and Medicine (NCGM) collaborated with Prof. Dr. Sulianti Saroso Infectious Disease Hospital, a central institute in infection control in Indonesia, to run a training program in Japan and onsite training programs by dispatching a Japanese expert (one of such training programs was leadership training at Prof. Dr. Sulianti Saroso Infectious Disease Hospital). Through the program targeting medical staff in the hospital, NCGM contributed to the improved awareness and understanding of hand hygiene and oral care.

Project Implementer: National Center for Global Health and Medicine (NCGM) | Support: MHLW



▲ Japanese experts provide training to Indonesian medical staff  
Oral care training

#### Oral Care Supplies



NCGM introduced an oral care method using sponge brush manufactured by a Japanese company. The brush was actually used for patients at the local hospital. They also introduced alcohol hand sanitizers and alcohol sanitizer dispenser equipment to promote improved hygiene.

#### Interview



**Dr. Sho Saito**

National Center for Global Health and Medicine (NCGM)  
Disease Control and Prevention Center

Hospital-acquired infections such as ventilator-associated pneumonia are problems in many countries. Oral care has become one of the ways to prevent and are not yet common in Indonesia.

During the training conducted for this project, the participants showed great interest and were very enthusiastic about their training. We would like to continue to spread awareness of the importance of oral care and hand hygiene.

## Promoting understanding of hand hygiene and oral care and popularizing disinfectant

#### Understanding of hygiene Supplies

A test on hand hygiene and oral care conducted onsite found improved rate in correct answers after the training compared to the result before the training.

Furthermore, they organized a leadership training at Prof. Dr. Sulianti Saroso Infectious Disease Hospital. Acquired skills have since been further extended through initiatives like a hand hygiene and oral care workshop organized by program participants and targeting hospital's medical staff two months after the training.



Trainees providing training to medical staff

#### Dissemination of hygiene Supplies

After the training program, "monitoring of the amount of alcohol hand sanitizer consumed," an indirect hand hygiene monitoring method previously not used, was incorporated in the hospital's daily practice.

The alcohol hand sanitizer introduced at the time of training was later used during the surges in COVID-19 infection, playing a crucial role at Prof. Dr. Sulianti Saroso Infectious Disease Hospital, a central institute in Indonesia's infection control efforts.



Care with Japanese oral care supplies

#### Collaboration with organizations

Niigata University, equipped with extensive experiences in international cooperation in the field of oral care, supported the project at the time of training in Japan. Japanese companies specialized in hygiene control and oral care also supported the program.

Installation of alcohol hand sanitizers at Prof. Dr. Sulianti Saroso Infectious Disease Hospital was realized as a result. Furthermore, the "oral care method using sponge brush" initially introduced at the onsite workshop has been now used for patients. Their effort to promote the importance of hand hygiene and oral care continues.



Training at Sulianti Saroso Infectious Disease Hospital for Infectious Diseases

#### Interview



**Atika Rahmawani**

Registered Nurse,  
Sulianti Saroso  
Infectious Disease  
Hospital

We are very grateful to the NCGM for organizing the training on infection prevention (hand hygiene and oral care) at Sulianti Saroso Infectious Disease Hospital in October 2019.

In this training, I was able to learn about the importance of hand hygiene, how many times it is necessary, and how to use protective equipment. In addition, I was able to understand how to improve oral care that leads to the maintenance and recovery of oral functions. As a nurse, I would like to learn more about infection prevention and oral care practices to reduce pneumonia outbreaks in hospitals.

# Striving to improve patient quality of life (QOL) by promoting Japanese-style dental services

Human Resources Development

Products & Services

Industry/Social Infrastructure

## Japanese-style dental training started in Indonesia in 2016



▲ Trainees check the results of their aesthetic restoration procedures

Indonesia does not have a system in place that allows dentists to acquire dental skills in a continuous and systematic manner. The country has a shortage of dentists, with only 0.09 dentists for every 1,000 people. In addition to shortages of, and the lack of quality assurance for, medical equipment and instruments. The fact that Indonesia has numerous islands and a mountainous terrain is believed to have caused great regional disparities in dental services. In recent years, a rapid shift towards Western diets has made lifestyle diseases widespread, and the high prevalence of tooth decay has also become a serious problem for dental services.

Therefore, in October 2017, we established the Dental Training Center on the premises of Trisakti University, Indonesia's largest private university located in Jakarta. The aim is to provide clinical training to Indonesian dentists to teach them Japanese dental treatment techniques and show them how to use Japanese medical equipment, in order to improve their dental treatment proficiency. Currently, we conduct training for other universities at their request, and make continuous contributions in terms of both hardware (i.e. products) and software (i.e. training content).

Project undertaken by J. MORITA CORP.  
Project sponsored by the Ministry of Economy, Trade and Industry

### Root canal measurement & magnification instrument



A root canal measurement and magnification instrument is a device used to measure the length of a root canal (the length to the apex of a tooth root) for a lesion of the apical region (the apex of the tooth root), in order to enable efficient root canal treatment. Teeth extractions have very often been performed to treat periapical lesions in Indonesia, but this instrument has made it possible to increase teeth preservation rates.

### Interview



#### Shigemitsu Murai

General Manager,  
International Sales  
Department  
J. MORITA CORP.

We carried out this project with a focus on how to develop highly efficient, high-quality programs and incorporate them into the curriculum, through hands-on workshops, which help trainees to put their learning to use for practical applications in the clinical setting, and dialog-focused interactive lectures.

In particular, we put more effort into ensuring alignment between Japan's world-leading advanced dental equipment and the direction of Indonesia's dentistry training, among other things.

The project was impacted by the COVID-19 pandemic, and much of the training content could not be provided online. We are however hopeful that we will be able to resume activities robustly in the autumn of 2022. We remain committed to further increasing our presence and contributing to the good health of people in Asia.

## Helping dentists to maintain good health. Providing sustainable dental services

### Various training programs

The comprehensive dental services offered in Japan are designed to enable a single dentist to efficiently perform an entire process, from conducting examinations to providing care and treatment. Japan's dental services are characterized by availability of the training, technology, and products needed to perform all stages of processes with high precision. The Japanese-style programs that provide one-stop solutions to oral health problems were welcomed in Indonesia where there are shortages of dentists.



Training participants

### Contributing to the good health of dentists

Dentists perform surgical procedures in a small surgical area, i.e. in the mouth of a patient, and their work can take its toll on their bodies, e.g. posture and eyesight. Efficiently performing dental procedures with good posture can prolong dentists' professional careers.

The project, which provides support for dentists to maintain good posture in terms of both theory and products, enables dentists to offer high-quality treatment to their patients for years to come.



The dentist's posture while performing dental procedures has changed. Before the training (photo on the left) and after the training (photo on the right)

### Working and developing with the Indonesian Dental Association and other universities

The training programs implemented in the project have been adopted as a lifelong learning program of the Indonesian Dental Association, which Indonesian dentists must undergo when renewing their dental licenses. We received several inquiries from other universities after the project was completed.

By expanding the project from providing training to boosting dentists' skills and marketing Japanese medical equipment, we will continue to help improve the quality of Indonesia's medical services.



The instructor demonstrates Japanese medical equipment. (The instructor also participates in the training and provides guidance on dental treatment techniques.)

### Interview



#### Prof. Tri Erri Astoeti

Dean of Faculty of Dentistry,  
Trisakti University

Dentistry is one of the fields in which hygiene standards are advancing most rapidly in Indonesia, and the COVID-19 pandemic has given rise to a range of studies not only on the dental treatment system, but also on the dental practice environment and training settings.

I hope that, through the training given in this project, dentistry will make further advances by accurately grasping new social needs that have emerged, so that dentistry can respond to the changing times in a flexible and best possible manner.

## Contributing to Rheumatology through technology, equipment, and educational materials

Human Resources Development

Products & Services

Industry/Social Infrastructure

### Provide detailed training, including knowledge transfer, practical skills instruction, and exchange of opinions

Rheumatism is a disease in which inflammation occurs in joints due to abnormalities in the immune system, and if left untreated, the joints become deformed. Once the disease progresses, it is said to be difficult to return to the original state, so early diagnosis and early treatment are important.

In Indonesia, however, the number of specialists in rheumatism is extremely small, at only 70, and they are concentrated in urban areas. Furthermore, because of the prevalence of infectious diseases such as tuberculosis, the "immunosuppressive therapy" used to treat rheumatism requires a higher level of management than usual.

Therefore, the Division of Rheumatology Department of Internal Medicine Keio University School of Medicine, which has world-class skills and experience in rheumatism treatment, has implemented a project to improve the quality of rheumatism treatment in Indonesia since 2018.

With the full cooperation of the Indonesian Rheumatism Association (IRA), they dispatched medical specialists, held symposiums, and provided teaching materials and practice equipment in order to convey the skills and experience of Japanese doctors to the local community.

Through this project, they are contributing to the establishment of a foundation and system for autonomous and sustainable rheumatism treatment.

Project Implementer: Educational Corporations Keio University | Support: MHLW



▲Organize local musculoskeletal ultrasonography workshops

### Educational video teaching material "Rheumatology and Collagen Disease"



Through the project, Keio University produced an educational video teaching material "Rheumatology and Collagen Disease" in Indonesian.

It consists of 18 videos (basic, applied, and technical) for doctors and 9 videos for patients, for a total of 27 videos, and some of them are available on the IRA website. It is used for the spread of rheumatoid arthritis medicine.

### Interview



#### Katsuya Suzuki

Doctor, Associate Professor, Department of Internal Medicine /Rheumatology, Keio University

At first, it was a project that we started while fumbling around, but with the support of the enthusiasm of the local people and the cooperation of many people, we believe that we were able to achieve unprecedented results.

Despite the impact of the pandemic, we were able to vigorously promote the project even remotely because we had already built a relationship with the local community. On the other hand, there are still few materials for pharmacists and nurses, and I feel that it is difficult to realize the importance of multidisciplinary collaboration and team medical care through online training alone.

After the pandemic is over, we will continue to contribute to the development of rheumatism medicine in Indonesia by conducting face-to-face on-site training with the aim of solving problems in line with local needs.

## Promoting rheumatism education through training that involves specialists, patients, and their families

### Expert Technology Transfer

In the first year, seven Japanese medical specialists were dispatched to Indonesia, where opportunities for clinical education are limited. They held symposiums with local specialists, provided clinical guidance at the University of Indonesia, Padjadjaran University, and Udayana University, and shared their medical skills.

Subsequently, in the wake of the coronary disaster, Keio University provided hybrid training and other patient-participation programs using remote systems, which allowed us to directly transfer medical skills and knowledge to almost all of the specialists in the IRA.

They are contributing to local rheumatism education and to the improvement of rheumatism treatment skills and knowledge.



Hybrid training with local patient participation (ARMS, Nusa Tenggara Timur, September 12, 2021)

### Multifaceted support

Keio University invited IRA members to Japan for a program including hands-on training in joint echo, which is not available in Indonesia, chemotherapy, and mixing and administering biological drugs by pharmacists. Participants showed great interest in the program and discussed how best to use the echo in actual practice, while trying it on themselves.

The International Symposium featured lectures by the Department of Rheumatology, as well as Radiology, Dermatology, and Orthopedics. The symposium contributed to the development of rheumatism treatment, in which diagnosis is made while excluding various diseases.



Technical guidance by pharmacists (Biological preparation adjustment)

### Free distribution of original materials

For educational purposes, the Proceeding book of IRA-Keio Rheumatology 2021 and the practice guidelines for Sjögren's syndrome, osteoarthritis, scleroderma, and steroid osteoporosis (electronic and print versions) have been produced.

Keio University distributed them free of charge through the IRA to universities throughout Indonesia, as well as to hospital libraries and to specialists, internists, and general physicians.

Some of these have been accredited as Continuing Medical Education (CME) by the Indonesian Medical Association and are being implemented as high-quality medical education programs.



Educational books and practice guidelines were developed and distributed

### Interview



#### Laniyati Hamijoyo MD

Internal Medicine & Rheumatologist, Rheumatology Division, Internal Medicine Department Faculty of Medicine University of Padjadjaran / Hasan Sadikin Hospital

This project is very useful for us. Through this education project we have opportunity to increase the knowledge of the physician from general practitioners, internal medicine specialists, as well as rheumatologists in management of autoimmune-rheumatic musculoskeletal diseases (ARMD). Many activities have been done, recommendations for managing several ARMDs have been developed to help physician in daily practice.

We hope this project can provide better outcomes for patients in Indonesia.

Aiming to Save "new lives" by spreading the use of the Resuscitation Monitor for Neonates

Human Resources Development

Products & Services

Industry/Social Infrastructure

Supports breathing in newborns, reducing sequelae and mortality



▲ Scene of CPR practice dolls and monitor in use

In 2020, approximately 2.4 million newborns worldwide died within 28 days of birth each year, and about 47% of all deaths among children under 5 years of age were among newborns. In Indonesia, the current mortality rate is 14 deaths per 1,000 newborns within 28 days of birth, still failing to reach the SDG target of less than 12 deaths per 1,000 newborns.

One of the reasons for this is that the 15% of newborn cannot not breath by themselves at birth. It is important to provide adequate positive-pressure ventilation (PPV) immediately after birth to initiate spontaneous breathing and circulation.

In response, NIHON KOHDEN CORPORATION developed the Breath Cue NRM-1300, a patient monitor specialized for neonatal resuscitation. NIHON KOHDEN and Japanese neonatal physicians then began to collaborate with Indonesian physicians for appropriate neonatal resuscitation. NRM-1300 monitors the vital sign of baby as well as the quality of PPV, aiming to reduce the mortality rate and incidence of serious sequelae in newborns.

Project Implementer: NIHON KOHDEN CORPORATION | Support: MHLW

A patient monitor specialized for neonatal resuscitation "Breath Cue, NRM-1300"



Monitors information required for neonatal resuscitation (ECG, oxygen saturation, respiratory flow, airway pressure). The flashing LED lights visually assist health care provider (HCP) in manually providing PPV in a state of neonatal distress. Compact, lightweight, and battery-powered (3 AA batteries), it is designed for use in any location.

Interview



Fumihiko Takatori

NIHON KOHDEN CORPORATION

Together with Japanese neonatal physicians, we visited hospitals and clinics in Indonesia. Then, taking into account local conditions and opinions, we developed a monitor to support the appropriate neonatal resuscitation. The monitor makes it possible to monitor the heart rate, oxygen saturation, and other parameters of newborns in need of treatment, while supporting HCP in their PPV techniques to promote proper breathing.

We will work with Japanese neonatal physicians to improve their education and training in neonatal care in Indonesia so that HCP can make full use of this monitor that will save precious lives. We hope to improve neonatal resuscitation care in Indonesia.

Facilitate operations in a locally appropriate manner in collaboration with Japan

Monitor dissemination & training

Positive pressure ventilation (PPV) is manually performed to assist breathing when a newborn is in a state of neonatal distress.

When performing PPV, it is important to make sure that the right amount of air is being delivered at the right rhythm to the lungs of the newborn, which are very sensitive, and that there are no leaks.

In addition to promoting the monitor, this project provides how to improve the training on neonatal resuscitation by Japanese neonatal physicians.



Confirming the use of the product by listening to local opinions

Conduct seminars for trainers

NIHON KOHDEN and Japanese neonatal physician collaborated to conduct seminars for Indonesian physicians on Japanese neonatal medical knowledge, procedures, and training methods. Although the seminars were held via the web due to the Corona disaster, more than 100 people attended each seminar, and very enthusiastic questions were exchanged.

After the seminars, they have started a training program for trainers to fit in their practice.

In future, we plan to work with the Japanese physicians to implement suggestions in order to further improve Indonesia's resuscitation program.



Scene of an online seminar being conducted

Collaboration with local institutions

Indonesia's Ministry of Health has set a goal of improving the neonatal mortality rate in 2015, and medical institutions are taking tangible steps to improve the rate.

Education is very important to improve the neonatal mortality rate. Therefore, NIHON KOHDEN and Japanese neonatal physician are working with the RSUPN Dr. Cipto Mangunkusumo National Central Public Hospital, which is also an educational institution for Indonesian medicine, to improve operations in a way that suites their local way, while sharing Japanese-style educational systems and knowledge.



Discussion at the RSUPN Dr. Cipto Mangunkusumo Hospital

Interview



Dr. Distayu Sukarja

Doctor, RSUPN Dr. Cipto Mangunkusumo Hospital

We had webinar from Japanese neonatal physicians.

It was really good, and it helps us to develop our own program.

Interview



Dr. Risma Kaban

Doctor, RSUPN Dr. Cipto Mangunkusumo Hospital

We hope to improve neonatal resuscitation. Let us keep collaboration.

## Contributing to the advancement of treatment by improving dialysis water and training

Human Resources Development

Products & Services

Industry/Social Infrastructure

### Providing a place to learn about the "theory and practice" of dialysis treatment

In Indonesia, "dialysis treatment" for chronic renal failure patients is rapidly spreading due to the improvement of the medical environment and the application of universal health insurance for dialysis treatment. In chronic renal failure, there is little hope of recovery from lost kidney function. The potential demand for "dialysis treatment," which supplements part of the kidney function, appears to be high. In Indonesia, however, the average life expectancy after the introduction of dialysis therapy is about three years. The results of the treatment have not been good.

To improve the quality of dialysis treatment, in addition to training dialysis nurses and improving the equipment management system, it is necessary to improve the quality of dialysis water (water after impurities are removed from tap water), which is an important part of dialysis treatment.

In this project, St. Mary's Hospital, located in Kurume, Fukuoka, Japan, began medical, and technical cooperation in April 2017 at the request of Airlangga University Hospital in the Indonesian port city of Surabaya. Through seminars and training, the hospital contributes to improving the quality of dialysis water, training dialysis engineers, and improving dialysis treatment in Indonesia.



▲ Endotoxin Retentive Filter (ETRF) Unit produced during training in Japan

Project Implementer: St. Mary's Hospital, Our Lady of the Snow Social Medical Corporation | Support: MHLW

#### Endotoxin Retentive Filter (ETRF)



To produce clean water for dialysis, this project first uses a water purification system called an RO system to remove ions and other substances from the water. From the resulting product water, a particulate filter called an Endotoxin Retentive Filter (ETRF) is used to create an ultra-pure dialysate free of bacteria, endotoxins, and other impurities. This dialysate is used to achieve a high standard of dialysis.

▲ ETRF installed on dialysis machine

#### Interview



#### Nobuyuki Ono

Director,  
Administration Office,  
St. Mary's Education and  
Research Center

In this project, we aim to train engineers at Airlangga University Hospital to take on leadership roles.

Through this support activity, over the past four years, four engineers have received training at St. Mary's Hospital, where they learned knowledge and skills. They identify problems in dialysis treatment at their facilities, think of ways to improve them, and put them into practice.

Other engineers have taken on leadership roles.

We plan to work with engineers from Airlangga University Hospital to provide technical assistance to facilities around Surabaya.

## Mastering and Applying Advanced Japanese Technology to Achieve Dialysate Purification

#### Improved the quality of product water

Four engineers from Airlangga University Hospital visited Japan in October 2018. They participated in a two-month training program, including hands-on training in "viable culture techniques" for testing dialysate cleanliness.

Then, in January 2019, four technicians and nurses from Japan visited Indonesia to follow up on this training. Lively discussions were held to resolve problems and questions that arose while implementing what they learned in training. In addition, endotoxin levels measured at this time had dropped to about one-tenth of what they were in August 2018. They have seen many significant improvements continue to be made.



Practical training in viable culture testing at St. Mary's Hospital

#### Local engineers take the Initiative

In 2020, Japanese experts were sent to Airlangga University Hospital to discuss plans. They could confirm further efforts for purifying dialysis fluid by applying the technology acquired during the training in Japan.

Endotoxin Retentive Filters (ETRF) were installed in the piping of the RO system (water purification system). In addition, submersible sterilization lights were added to the water tanks. The engineers selected the model of the sterilizing lamps to ensure that they would be effective in the tanks. The Japanese experts saw the engineers thinking for themselves and actively working on the project.



Sterilization lights on RO water tanks installed by local engineers

#### To establish Education & Qualifications

Participants were recruited for the online training conducted in December 2021, targeting the East Java region. In Indonesia, which consists of many islands, online training enables the development of medical human resources that are not biased toward urban areas. St. Mary's Hospital will further expand the content of the online training program and promote the creation of an online training system no less effective than face-to-face training. A training center will be established on-site to train engineers. The results of this project will be spread to other institutions. It is expected to contribute to the establishment of educational and qualification systems.



Demonstration of endotoxin concentration measurement in Indonesia

#### Interview



#### Bagas Angger Prakoso

Head of Facility Maintenance  
and Sanitation Installation,  
Universitas Airlangga Hospital

This joint project has benefited the development and advancement of water treatment, especially hemodialysis. It allows us to experience and gain further knowledge about water treatment technology and hemodialysis equipment.

We believe that through the efforts we have made together, we have been able to make a positive difference for hemodialysis patients through our services at the hospital. We look forward to continuing to develop these projects.

Provides a platform for real-time visibility and Contributes to employee health management

Human Resources Development Products & Services

Temperature check by simply holding the face over the device & automatic input to prevent infections



In Laos, where health awareness is increasing, and interest in health management and health checkups is growing, the outbreak of new coronavirus infection has created a need to grasp personal health information accurately and to take after-coronavirus measures to use past health information for health maintenance and treatment.

Ryobi Systems Co., Ltd. introduced "eHealth Lite," a health observation tool developed by the company, to Laos. As a countermeasure against infectious diseases such as the new coronavirus and dengue fever, as well as diseases specific to the local area, Ryobi Systems has established a system to detect employees and staff in poor health at an early stage and prepare for the spread of infection in case it occurs.

This health observation tool is a health management platform based on personal health records (PHR) stored and archived by hospitals and pharmacies. By linking with AI cameras that can perform facial recognition and automatic temperature checks, the tool enables companies and organizations to visualize in real-time when, who, and if there are any abnormalities in body temperature or physical condition, and to manage health at the same time.

It can also be combined with online remote health consultations with Japanese public health nurses, contributing to the promotion of health in local communities..

Project Implementer: Ryobi Systems Co., Ltd. | Support: JETRO

▲ (left photo) Screenshot of AI camera capable of with facial recognition + automatic temperature measurement  
(right photo) "eHealth Lite" screen showing automatic input of temperature data immediately after taking a temperature

Health observation tool "eHealth Lite"



Once employees input health-related information from their smartphones, PCs, or other devices, managers can monitor the health status of individual employees on the management screen. This is a tool for paperless health management. The registered information is tabulated in real-time and can be displayed in a graph. (English and Laotian are supported)

Interview



Yoshifumi Makimoto

Healthcare Solution Division, Ryobi Systems Co.,Ltd.

Today, corporations and organizations are required to coexist with the new coronavirus. They are required to manage the health of their employees and operate based on the prevention of cluster infections, etc.

Ryobi Systems Co., Ltd.'s health management platform makes it easy for employees to record changes in their health conditions. Managers can centrally manage the health status of their employees in real-time. This cloud service can be introduced easily and quickly.

We will continue to support the improvement of the health of the Laotian people by providing health measurements using equipment and remote health consultations.

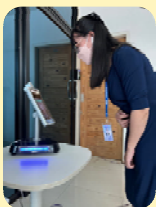
Offering easy and quick health measurement and online health consultation with Japan

Prompt approach to febrile persons

Registration of the employee's photo in the AI camera enables identification of the employee at the same time as taking their temperature. The system automatically inputs the day's temperature information to the "eHealth Lite" administrator's site.

This allows online temperature data management instead of paper-based management, enabling employees with a fever to be instructed to return home in real time.

The system also enables the management of vaccination certificates, significantly reducing the data entry and management burden.



◀ Body temperature check with AI camera



"eHealth Lite" management screen ▲  
(Administrators can check body temperature etc. at a glance)

Following up on health consultations

Since it is not easy to check health conditions at hospitals in Laos, Ryobi Systems regularly conduct simple health measurements using the "ESTECK" health measurement device.

The results are used to provide online health counseling in collaboration with Japanese public health nurses. This service contributes to health promotion by providing advice on health problems and how to improve them.



Health measurements using "ESTECK"

Proposal to the MTC

Ryobi Systems introduced and demonstrated their healthcare services toward countermeasures against new coronavirus infection at a strategic meeting for economic development organized by the Ministry of Technology and Communication (MTC) of Lao PDR and the Lao ICT Commercial Association (LICA).

The facial recognition using AI cameras and real-time linkage of temperature data to cloud services for immediate integrated management by administrators attracted a high level of interest.



The Strategic Council for Economic Development

Interview



Boupamany Chounramany

Alliance International Medical Centre

An "AI camera" has been set up in front of the hospital's time recorder to check temperatures upon arrival at work, and health management operations have begun. This allows the staff to check their physical condition changes on their smartphones, etc., and also allows hospital administrators to monitor the physical condition of their staff.

Since cluster infection of new coronavirus infection is a major problem for work operations, this system is being used as a mechanism to manage temperature check data centrally.



# Early detection & diagnosis through AI diagnosis support & endoscopist training

Human Resources Development | Products & Services

## Demonstration survey in Thailand of an AI diagnosis support system for colonoscopes

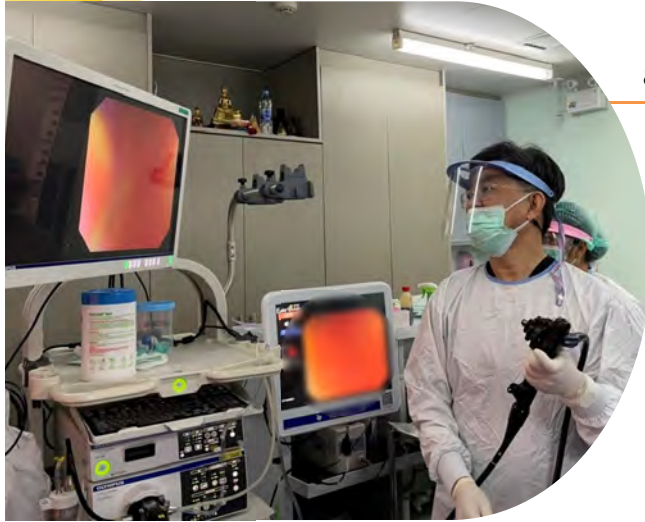
In Thailand, the cancer rate has been increasing in recent years due to the westernization of dietary habits associated with economic growth and an aging society. Colon cancer, in particular, has become a social issue as the fourth most prevalent cancer and the third leading cause of cancer deaths.

Colon cancer can be treated by detecting polyps before they become cancerous. However, while colonoscopies are effective for early detection and diagnosis, they require a high skill level.

In light of this, Olympus Corporation (hereafter referred to as Olympus) established T-TEC, an endoscope training center in Bangkok, in July 2016. It provides endoscopy training and education to medical practitioners, mainly from Southeast Asia.

Moreover, from July 2021, it collaborated with the Thai Association for Gastrointestinal Endoscopy (TAGE) on an evaluation of an AI diagnosis support system developed in Japan at three major medical institutions in Thailand. It contributes to the early detection and diagnosis of colon cancer.

Project Implementer: Olympus Corporation | Support: MIC



▲Evaluation of the AI device at a medical institution in Thailand



### AI diagnosis support system

The AI diagnosis support system was developed for colonoscopies. Working with an endoscope that can magnify images of the intestine's interior, the AI analyzes the images in real time, indicating the possible position of suspicious lesions and assisting physicians in determining whether it needs to be removed.

### Interview



#### Yukio Kanekuni

Vice President,  
Government Affairs Global,  
Olympus Corporation

In this project, by conducting the equipment evaluation at three Thailand's leading medical institutions in collaboration with TAGE and Japanese experts, we received good evaluation results that will lead to further product development.

While communications between Thailand and Japan have been mainly online, we've held productive discussions on various topics, including the differences between each country's medical environments.

The project aims to improve Thailand's medical standards by developing and disseminating medical products.

## AI installed on colonoscopes assists physicians in their diagnoses

### AI reduces burden

In this project, Japanese physicians with a thorough knowledge of the AI device held online training sessions to demonstrate how it can identify potential lesions, determine in real-time whether they should be removed, etc.

AI-assisted colonoscopies are expected to reduce the burden placed on physicians and patients.



A doctor uses an AI-assisted colonoscope

### AI utilized in medical education

AI diagnosis support system are also being introduced in the medical education field. In the event that a lesion is overlooked, the AI will issue a warning and notify the doctor, helping them improve their diagnostic skills.

The project's AI device has been lauded as an effective training tool.

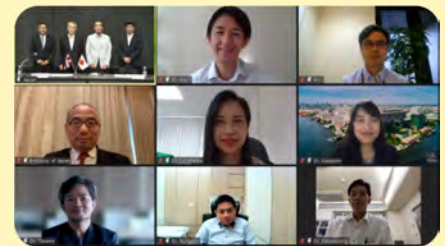


Young doctors receive training using AI

### Promoting health through the AI

Japan's AI devices have already been introduced to various medical institutions in Thailand and utilized in the medical field.

In August 2021, the Thai and Japanese governments concluded a Memorandum of Cooperation in the field of medical care, public health, and healthcare, with cooperation being promoted in the field of comprehensive healthcare. The regular use of AI devices in Thailand's medical field will contribute to the improvement of Thailand's medical care and the health of its citizens.



Project members from Thailand and Japan (Physicians, government personnel, etc.)

### Interview



#### Nonthalee Pausawasdi

Associate Professor,  
Division of Gastroenterology, Department of  
Medicine,  
Siriraj Hospital, Mahidol University, President  
of the Thai Association for Gastrointestinal  
Endoscopy (TAGE)

In this project, the AI device was evaluated at medical institutions in Thailand in discussion with Japanese doctors. While Thailand is in the early stages of incorporating AI, we expect it to take off widely in the future.

This project gave us the opportunity to use AI, and we hope to continually perform AI-assisted endoscopies.

## Realizing remote fetal monitoring through ICT technology

Products & Services

### Reducing maternal and fetal risks with a small, data-transmitting device



▲ An iCTG being used in Thailand

Thailand's perinatal care faces a challenge, with a maternal mortality rate of 37 out of 100,000 and a neonatal mortality rate of 5 out of 1,000. In Japan, CTG is incorporated into maternal checkups and regularly monitored. Confirming fetal health before delivery has helped reduce the perinatal mortality rate.

In light of this, Melody International has been participating in a JICA Grassroots Technical Cooperation Project since 2015 to share its knowledge with the world. In 2018, it introduced the small, affordable, and rechargeable Fetal Monitor iCTG (hereafter referred to as iCTG) to all 25 public hospitals in Chiang Mai, Thailand. This enabled 16 medical facilities without resident obstetricians to share data on expectant mothers.

To replicate this success case in the capital city of Bangkok, it started proofs-of-concept in October 2021. By popularizing fetal monitoring and coordinating smoothly with specialists, it is contributing to the early detection and treatment of high-risk mothers and a decrease in maternal, perinatal, and neonatal mortality rates.

Project Implementer: Melody International Ltd. | Support: METI

#### IoT-type Fetal Monitor iCTG



The originally developed Fetal Monitor iCTG comprises two small devices. One measures the fetal heart rate, while the other monitors the uterine contraction rate. The devices are placed on the expectant mother's abdomen, and the results can be shared via smartphones and tablets, enabling doctors to use them in examinations.

#### Interview



**Tatsuya Kambara**

Cooperate Planning Dept.  
Overseas Business Manager,  
Melody International Ltd.

According to reports published by UNICEF and the WHO in October 2021, two million stillbirths (one every sixteen seconds) occur each year in developing countries.

By using the mobile iCTG to address this issue and building a system that enables the early detection and treatment of risks to the fetus and mother, we aim to contribute to the achievement of SDG 3 (maternal and neonatal mortality)—the target of which Japan has already well surpassed—and share Japan's excellent perinatal management methods with the world.

## Improving maternal and child healthcare service with an e-health network system

### Realizing remote fetal monitoring

At King Chulalongkorn Memorial Hospital, field tests were held with the cooperation of local expectant mothers. These verified that the use of the Fetal Monitor iCTG by expectant mothers enabled medical practitioners located far away to monitor the fetus' condition via the internet anytime and anywhere.

The device was also used at a COVID-19 ward located 500 meters away from the main building to remotely monitor expectant mothers, serving as a preventative measure for medical practitioners and reducing their workload.



A nurse briefing at King Chulalongkorn Memorial Hospital

### To hospitals without obstetricians

iCTG has been introduced to public hospitals in Chiang Mai Province and is used for prenatal checkups at three community hospitals in regions that do not have resident obstetricians.

iCTG has also been introduced at all 25 public hospitals in the Chiang Mai districts. By sharing data from the 16 medical institutions without resident obstetricians with hospitals that do, a network that connects primary medical institutions with tertiary medical institutions has been formed.



An iCTG being used in the Chiang Mai pilot project

### iCTG x Join system collaboration

The iCTG system was upgraded and made compatible with Join, Allm's communication app for medical professionals.

By replacing the free chat tool with Join, it can now safely and speedily share data, including ultrasound images, which iCTG had been unable to handle.

It's been shown to reduce the time to treatment and unnecessary transport.



A briefing and demonstration on how to use iCTG and Join

#### Interview



**Suparta Sirichotiyakul**

Prof,  
Chiang Mai University  
Department of Obstetrician  
and Gynecology

According to the project in Chiang Mai province, Thailand, iCTG is the portable and wireless device which is good for rural hospitals, referral system and home visitation that OB doctors and medical staff can monitor and consult remotely without any risk to pregnant women and can make them more confident and ensure that their babies are safe with this device anywhere and anytime.

# Early detection and Treatment of liver cancer through Japanese-style regular surveillance

Products & Services

## Multiple tumor markers and highly accurate testing for early detection



▲ Seminars conducted in Thailand in FY2022

There are a very large number of patients with liver cancer in ASEAN countries. Particularly in Thailand, it ranks first in the country in both incidence and deaths. However, regular surveillance of liver cancer in Thailand only recommends ultrasonography and one type of tumor marker test. Therefore, it is an issue that the cancer is often advanced at the time of detection.

On the other hand, in Japanese liver cancer surveillance, in addition to ultrasonography and tumor marker, it is recommended to combine two types of markers that are more specific for liver cancer, enabling early detection of cancer and curative treatment.

In this project, Fujifilm Corporation will demonstrate Japanese-style liver cancer surveillance using multiple Liver Cancer Markers at several medical institutions in Thailand. Based on the results, they aim to incorporate this testing system into Thai liver cancer treatment guidelines to contribute to the early detection and treatment of liver cancer in Thailand and to reduce the mortality rate.

Project Implementer: FUJIFILM Corporation | Support: METI

### A device used for hepatocellular carcinoma surveillance "μTASWako™ i30"



A device that can perform three types of marker tests, AFP, PIVKA-L, and AFP-L3%, with low sample volume and high sensitivity. This enables surveillance with multiple Liver Cancer Markers. It realizes rapid and fully automated sample measurement, from sampling to result reporting in 9 minutes.

### Interview



#### Hiroyuki Yamada

Ph.D.  
Manager, In Vitro Diagnostics Div, Medical Systems Business Div, FUJIFILM Corporation (Japan)

With the development of medical technology, cancer has become a disease that can be completely cured by early detection. And for early detection, regular and effective surveillance of cancer-risk patients is critical. Currently, Thailand has a shortage of radiologists and a lack of awareness of the usefulness of liver cancer markers.

We, Fujifilm, have specific biomarkers for liver cancer, and we believe that we can contribute to the improvement of medical technology in Thailand by developing guidelines for liver cancer surveillance using these markers.

In the future, I would like to make use of my experience in Thailand, expand from ASEAN countries to the world, and save more lives.

## Promote demonstration research in cooperation with local authorities toward insurance coverage in Thailand

### Seminars & Empirical Studies

A seminar was held for hepatologists, gastroenterologists, and technicians in Thailand to introduce Japanese-style liver cancer surveillance using multiple Liver Cancer Markers and its usefulness and effectiveness.

Through case reports from Japanese physicians, FUJIFILM are promoting activities to raise awareness and promote the usefulness of the system, aiming to contribute to the early detection of cancer and to improve the survival rate of patients with liver cancer.

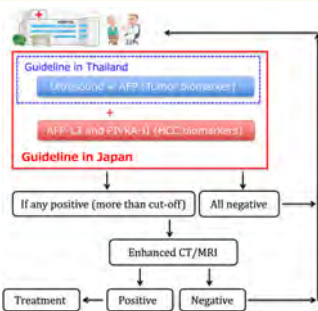


Diagram of Hepatocellular Carcinoma Surveillance (Japanese-style in red frame)

### Established a base in Thailand

In 2019, this project introduced Japanese-style surveillance and diagnostics to Siriraj Hospital, Mahidol University, in Thailand. Data collection for clinical research has begun.

FUJIFILM are also working closely with local researchers to advance the project by providing detailed training and study sessions on the characteristics of each Liver Cancer Markers, its usefulness, and the meaning and interpretation of the measured values.



Collecting data for clinical research at a university hospital in Thailand

### Toward insurance coverage

Through efforts such as a single-center, small-scale study to demonstrate the usefulness of the three Liver Cancer Markers, FUJIFILM established a working group within the Thai Society of Hepatology in 2020 to work toward inclusion in the Hepatocellular Carcinoma Guidelines/Insurance Coverage.

Currently, in collaboration with the members of the working group, they are working on information collection and multi-center demonstration studies for inclusion in insurance guidelines and insurance coverage.



With members of the Thai Society of Hepatology at the seminar venue

### Interview



#### Dr. Tawesak Tanwandee

Chief, Department of Gastroenterology, Siriraj Hospital, Mahidol University

This program is very useful, especially for radiologists in countries where ultrasound is not readily available. In a preliminary study at Siriraj Hospital, adding AFP-L3 and PIVKA II to ultrasound and AFP increased detection sensitivity by 33%.

An ongoing Thai Liver Society (THASL) collaboration is expected to establish clinical utility and include the triple biomarker in THASL guidelines. We believe that this will improve the surveillance rate and the survival rate of liver cancer patients in Thailand.

# Promoting "disinfection and cleaning" to improve the environment

Human Resources Development

Products &amp; Services

Industry/Social Infrastructure

## Introduction of high-quality cleaning and disinfection systems



Hospitals and medical facilities in Thailand do not have equipment to wash and disinfect mattresses of beds in hospital rooms. And since there is no business operator to do so on their behalf, proper treatment against ticks, incontinence, etc. was not possible, and sanitary measures were not sufficient.

Therefore, TOKAI KIKI KOGYO CO., LTD., a manufacturer of medical and welfare equipment, introduced Japanese cleaning and disinfection equipment and started activities to improve the hospital environment in Thailand.

In October 2019, they established a locally-incorporated cleaning and disinfection plant and began to develop a business that will take root in Thailand, providing disinfection and cleaning as well as other complex services such as welfare equipment rental and maintenance. Through this activity, they will support the medical tourism industry and provide reasonable new services that will improve the health and quality of life of the people.

They have also begun educational activities on proper disinfection and cleaning for the people of Thailand, whose awareness of hygiene management has changed dramatically since the pandemic of COVID-19. In addition, they also plan to conduct a demonstration of a citywide infection control project targeting residential and commercial facilities.

By introducing high-quality Japanese cleaning and disinfection equipment and systems to hospitals and nursing care facilities, they are contributing to the improvement of the health of the Thai people.

Project Implementer: TOKAI KIKI KOGYO CO., LTD. | Support: METI

### Mattress antibacterial & deodorizing dryer



Adopting a heat-based disinfection method that does not create resistant bacteria, it is possible to kill 100% of mites such as scabies mites. In addition, the dryer installed in Thailand is equipped with a SunClean Shower System that sprays an antibacterial so that a mist of

rain falls from the nozzles, and the synergistic effect of high-temperature heating is used to clean mattresses and futons., further ensure the antibacterial, insecticidal, anti fungal and deodorant properties of the blanket.

### Interview



#### Masatoshi Nagase

COO/CFO,  
TOKAI KIKI KOGYO  
CO.,LTD.

With the support of the Japanese government, in a short period of time we were able to establish a joint venture with a strong local partner and launch a cleaning and disinfection center.

In addition, in efforts with the Thai Ministry of Health and the Thai Chamber of Commerce and Industry, we will build a public health consortium of multiple Japanese companies with our company as the contact point, and make proposals after packaging Japanese-style public health with all Japan rather than individually. I am glad that we were able to do it.

Due to the corona crisis, the service menu has expanded and the market target has changed, but the awareness of disinfection at the individual level has increased, and the need for disinfection has increased through this project. I continue to promote disinfection and cleaning mainly in Thailand.

## Introducing a Japanese-style health and sanitation system and contributing to the realization of a clean city

### Improving Public Health

At the beginning of the project, TOKAI KIKI KOGYO focused on mattress cleaning for medical care facilities. However, due to the Corona disaster, access to the facilities was no longer possible, so they began cleaning and disinfecting beds, wheelchairs, strollers, child seats, furniture, sofas, restraint belts, etc. for individuals.

In addition, they are also commissioned by wheelchair rental companies to clean and disinfect wheelchairs, thereby contributing to the improvement of public health in Thailand.



Cleaning and disinfection services for bedding, welfare equipment and household items

### Safe and Effective Services

TOKAI KIKI KOGYO provide environmental disinfection services using highly concentrated alcohol spray, which is safe and effective and does not pose a risk of catching fire by using the pressure of liquefied carbon dioxide gas.

They started the service at a restaurant directly managed by the Central Group, a major distribution company in Thailand, and have expanded our service to other business establishments and general households. They are also contributing to the improvement of the sanitary environment of commercial facilities.



Providing environmental disinfection services at commercial facilities

### With Government, Commerce

TOKAI KIKI KOGYO have built an ongoing relationship with the Thai Ministry of Health by organizing infection control seminars, planning events, and participating in the advisory committee for the Nursing Care Project Bill. They will continue to contribute to the promotion of health in Thailand by providing Japanese techniques and experience through regular seminars and other activities.

They are also building a network in Thailand with the Thai Chamber of Commerce and Industry by participating in their regular meetings to build a relationship that enables us to obtain local information quickly.



Accompanying officials from the Thai Ministry of Health to the METI when they visit Japan

### Interview



#### Shinji Hayashi

Managing Director  
MATSUNAGA  
(THAILAND)  
CO., LTD.

We have been dealing with high-quality, multi-functional wheelchairs from Japan, but there was a severe price competition with products from other countries, and we felt the difficulty of selling them. However, through this project, we were able to establish the "Cleaning and Disinfection Center" with equipment from TOKAI KIKI KOGYO. This facility is equipped with a disinfection machine that is widely used in the rental business under the Japanese long-term care insurance system, and we have had the opportunity to convey Japanese quality "products" and "things" to the market.

In the future, we would like to expand the consortium further and spread Japanese welfare equipment widely in the Thai market.

Japanese companies contribute to solve health issues through a consortium

Products & Services

Providing Japanese nursing care products and services to Thailand, where the declining birthrate is aging

In this project, MATSUNAGA MANUFACTORY Co., Ltd. (MATSUNAGA) and KAIGO Life Co., Ltd., which was established in March 2020, collaborate to conduct business matching between companies active in Thailand and local governments in Japan. By forming a consortium of medical and welfare-related companies in Japan and Thailand, MATSUNAGA is promoting activities aimed at solving health issues from a local perspective.

In addition to introducing Japanese products, in September 2020, "Japan Wellness Showroom & Studio", an information dissemination base for the healthcare industry, opened in the center of Krung Thep Maha Nakhon, and providing training on how to use the products.

They'd like to contribute as a bridge between Japan and Thailand, conveying the "right value" of Japanese high-quality medical and nursing care-related products and services to the "right partner" in the "correct place", and disseminating information locally. And they contribute to problem solving through collection and partnering with related parties. Also in the future, they aim to contribute to improving the QOL of Thai people, extending healthy life expectancy, and establishing a position as a healthcare hub in ASEAN, which is the goal of the Thai government.

Project Implementer: MATSUNAGA MANUFACTORY Co., Ltd. | Support: METI



▲ Opening Ceremony of KAIGO Life's Showroom in 2022

MATSUNAGA's Wheelchair

Even if the basic design of a product is the same, "usability" and "comfort" differ slightly depending on where it is used. Under the motto of "making what is needed where it is needed," MATSUNAGA has been focusing on development and production, and began its sales business in Thailand from 2014.



Interview



Masayuki Shii

Marketing Strategist, Interpreter, KAIGO Life Co., Ltd.

According to Japanese government data, 18.1% of the total population in Thailand is over 60 years old, and 11.9% of the total population is over 65 years old (as of 2020). In other words, Thailand faces many health challenges due to its rapidly aging population.

When working in Thailand, I think it is very important to think from the ground up with values that fit the local culture, rather than working only with Japanese values in a country with a different culture from Japan.

I would like to contribute to extending the healthy life expectancy of the Thai people by helping the Japanese healthcare industry to widely supply high-quality products and services to Thailand.

Become a bridge between Japan and Thailand and Contribute to improving QOL

Business Matching Thailand & Japan

In this project, regularly hold business matching events with local governments in Japan to realize collaboration with Thai companies.

Also, they are strengthening public-private promotions in Thailand by holding seminars on hygiene regulations hosted by the Thai Ministry of Health, regular information-sharing meetings with the Thai Chamber of Commerce, and holding seminars to provide information on the Thai market.



Banner for Matching Event

Support for easier "introduction"

In line with the needs of Thailand, MATSUNAGA has established a business model that allows customers to choose to introduce products more easily by providing the option of "rental" in addition to "purchasing".

By adopting the rental business model, users have deepened their understanding that this is a product that can be used for a long time.

In the early stages of the introduction, we conducted follow-up training on how to use the product, as well as training using videos, contributing to the improvement of the quality of nursing care and welfare.



Follow-up Training Sessions

Collaborate with the Thai government

Promoting cooperation with the Thai Ministry of Public Health, the Thai Chamber of Commerce, and other relevant organizations, by collecting trustable local information.

And, they are building a platform to provide useful information to Japanese companies seeking to enter the Thai market, and to offer consultation services specializing in medical and welfare services.

As a result, creating opportunities for Thai people to encounter excellent Japanese medical and welfare products and services.



Commemorative photo with Mr. Sanan, Chairman of the Thai Chamber of Commerce and others

Interview



ANN

Matsunaga (Thailand) Co., Ltd. Sales Manager, Nurse Assistant

In Thailand, wheelchairs made in Japan are relatively expensive. However, renting a wheelchair allows the customer to maintain it and use it with peace of mind. Customers also appreciate the fact that we can make decisions based on their situation, such as renting a wheelchair for only three months or buying it back.

We will continue to create opportunities to change wheelchairs just as we change clothes and accessories, and to help those who are ill or injured and those who need assistance and care.

## Contributing to Zero Malaria initiative through "Rapid, Simple, and Precise" Test Kit

Products & Services

### Facilitating detection of symptomless infection cases through independently developed test method

Malaria is an infectious disease epidemic in over a hundred countries. According to the latest statistics by the World Health Organization (WHO), it is a globally influential disease annually accountable for approx. 241 million infection cases and 620,000 deaths. In countries where malaria is widespread, diagnosis and treatment of patients with symptoms would be the topmost priority, but in countries with medium to low infection rates like Thailand, identification and treatment of asymptomatic cases (infection with low parasitic rate) not detectable with existing test methods are also important.

This project promotes the commercialization of "Malaria-LAMP (loop-mediated isothermal amplification) Test," which can fulfill the local needs to detect asymptomatic patients through the use of the bio-design method.

In 2021, EIKEN advanced the field test despite the rampant Covid-19 and confirmed that the test method's detection performance is equivalent to the existing system and applicable to clinical use. They are now planning to complete the clinical evaluation in Thailand and publish the result.

Through various improvements and establishment of User-friendly system to enable early diagnosis and treatment, they continue to work towards Zero Malaria.

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



▲ Testing at a hearing screening center of Ministry of Health Hue Central Hospital

#### Malaria detection kit "Malaria-LAMP"



▲ LAMP Device: Provides inexpensive, stable test results



▲ Malaria-LAMP Reagent (Detectable) Pan: 5 species of Plasmodium malariae, Plasmodium falciparum, Plasmodium vivax

The malarian infection test kit EIKEN have developed features a proprietary technology to amplify genes, called "LAMP (Loop-mediated Isothermal Amplification)." It is characterized by simplicity and swift result, enabling precise malarial gene test in a least-equipped test environment.

#### Interview



#### Shota Koyano

Department-4, Biochemical Research Lab R&D Division, EIKEN CHEMICAL CO., LTD.

The LAMP method can detect five species of Plasmodium malariae (Pan), Plasmodium falciparum (Pf), and Plasmodium vivax (Pv) with high sensitivity in about 1.5 hours. It is possible to find infected people even if they have symptoms. We are confident that this technology can contribute to the health of people suffering from malaria around the world.

In addition to the rapidity that makes use of our unique technology, the LAMP method, we are conducting research to develop designs that meet the needs of each country. I hope that Japanese technology will spread throughout the world.

## To develop a tool for the elimination of malaria

#### Explore needs through site visits

In our onsite visits, EIKEN conducted a survey on tools in need. To respond to the local needs, they developed a simple and safe test method that facilitates the efforts to capture infection trends and measure the effectiveness of preventive measures.

This test method enables swift detection of asymptomatic cases, fulfilling the local need by providing a precise surveillance to prevent new infection cases.



Scene of specimen collection

#### Improving equipment & instruments

Through the use of the bio-design method ( a program to develop human resource capable of developing medical devices ), EIKEN improved devices, equipment, consumables, and other tools.

After the improvement efforts, they visited a medical institute in Thailand and conducted usability evaluations for two times. The feedbacks they have obtained through questionnaire were generally favorable.



Improved using biodesign methods

#### Structure & Develop Evidence

Through the advancement of onsite verification of reactive surveillance featuring Malaria-LAMP system, EIKEN have obtained high-quality evidence. They publish their contribution in the Zero Malaria initiative through presentations at international conferences.

Because the project concept is useful in general LAMP methods, they will also promote its use in other LAMP test areas.



Build quality evidence in medical practice

#### Interview



#### Prof. Srivicha Krudsood

Head, Clinical Malaria Research Unit, Faculty of Tropical Medicine, Mahidol University

Most malaria-endemic countries are now approaching the last mile of malaria eradication. However, in some areas, MSAT (Mass Screen and Treat), a microscopy method that requires an experienced microscopist, is performed. By replacing this test with the more sensitive LAMP method, it is expected that malaria can be eradicated more quickly.

In addition to its high sensitivity, the LAMP method is a quick and easy-to-use diagnostic tool that requires less training time for mass screening.

Japanese Colorectal Cancer Screening System Realizes "Early Detection and Early Treatment"

Human Resources Development

Products & Services

Industry/Social Infrastructure

Contributing to the promotion of medical checkups and preventive medicine for the people of Thailand

In Thailand, "colorectal cancer" has become major cancer due to the aging of the population and the westernization of the diet, and countermeasures against this cancer have become an issue. However, there is currently no national-level colorectal cancer screening using automatic analyzers. Resident screening has been initiated mainly at Chulalongkorn University, located in Bangkok, the capital of Thailand.

EIKEN CHEMICAL CO.,LTD. has installed the "OC Sensor PLEDIA," a fecal occult blood analyzer that can test large volumes efficiently and effectively, at the Chonburi Province residents' health checkups since 2018 to verify the effectiveness of the health checkup system.

They are contributing to the improvement of the health of the Thai people by conveying to Thailand the technology, knowledge, and know-how of Japanese-style colorectal cancer resident screening and establishing an efficient screening system at the national level, in line with local customs, leading to early detection and early treatment of colorectal cancer.

Project Implementer: EIKEN CHEMICAL CO.,LTD. | Support: JICA



▲ Explanation of medical checkup system

Fecal occult blood analyzer "OC Sensor PLEDIA"



Early detection of colorectal cancer can be expected through periodic "fecal occult blood test," which tests for minute amounts of blood adhering to stool from colorectal cancer cells. This method has been adopted in many countries around the world because it enables efficient health checkups by quantifying the measurement results.

Interview



Kiyokazu Kanemoto

EIKEN CHEMICAL CO., LTD.  
Global Business Department-1,  
Global Business Division

With differing mindsets toward cancer screening, building a system aligned with the local community was a significant challenge. With the cooperation of Chulalongkorn University, we communicated the value and impact of this project to medical professionals. As a result, the number of medical institutions showing interest in the project increased.

I was pleased when the number of participants who wanted to be screened for colorectal cancer increased, thanks to the enthusiasm of medical professionals and health volunteers.

We are happy to contribute to the health of many people through the "no dietary restriction" and "quantifiable" immunoassay fecal occult blood test, a technique that originated in Japan.

We hope that this technology will be well received and that we will be able to spread this Japanese-style medical checkup system to Thailand and other ASEAN countries.

Reducing medical costs and improving quality of life

Benefits of Early Detection

It is estimated that medical costs in the late stages of cancer are approximately 3 to 10 times higher than the cost of treatment when the cancer is detected at an early stage.

Early detection and early treatment of colorectal cancer are essential for Thailand's healthcare policy and for reducing the burden of healthcare costs. This project is expected to contribute to the Thai government significantly.



OC sensor operating in a medical facility

Japan-ASEAN Health Initiative

EIKEN CHEMICAL's "fecal occult blood test", recognized worldwide for its performance and expertise and has now been introduced as a colorectal cancer screening program in many developed countries, is also adapted to Thailand's policy.

If the Japanese-style colorectal cancer screening test is widely introduced throughout Thailand, it will improve the Thai people's health. They will also promote awareness of colorectal cancer prevention in ASEAN countries.

Health volunteers distributing fecal sampling containers to examinees after the screening briefing session



After the briefing, health volunteers were given stool collection containers for examinees.

To establish a nationwide system

The "fecal occult blood test method" has also been introduced to colorectal cancer resident screening under the jurisdiction of Chulalongkorn University in Thailand. The early detection rate of cancer has been improved, making it a model case for future resident screening. In addition, educational seminars are held for residents in each district who are eligible for screening to promote their health.

In addition, EIKEN CHEMICAL have established a network with university and medical professionals. They have enlightened the Thai Ministry of Health on the importance of colorectal cancer screening. Our goal is to introduce a national screening system.



Endoscopy at Chulalongkorn University

Interview



Rungsun Rerknimitr

Doctor, Prof,  
Chulalongkorn  
University

In Thailand, the population is aging, and colorectal cancer has become a serious disease. It is said that colorectal cancer can be cured with early detection and treatment. In cooperation with EIKEN CHEMICAL, we have started a colorectal cancer screening program for residents. We investigated an effective and efficient screening model using this fecal occult blood test product, which features a technology that prevents blood in the feces from deteriorating for 72 hours, even at room temperature in the tropics after collection. Our ultimate goal is to create an environment where all citizens can participate in screening, establish a system for early detection and treatment of colorectal cancer, and reduce the mortality rate.

Through this, we aim to reduce medical costs. We also hope that this testing method will improve the quality of colorectal cancer screening and promote health in neighboring countries.