

# C-PRESS

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## Talk With

Guest **Takeshi Karasawa**

Former Director-General for Regional Revitalization, Headquarters for Overcoming Population Decline and Vitalizing Local Economy in Japan, Cabinet Secretariat  
Project Professor, Graduate School of Media and Governance, Keio University

Establishing healthcare system for integrating healthcare and nursing care into daily life





## The bullet train's kingfisher-inspired long nose

### CHANGE THE VIEWPOINT

Don't you think that it is surprisingly quiet inside the bullet train despite its extremely high speed? Actually, in the past, there were noise pollution trouble along the bullet train routes. Imagine the speed at which the bullet train rushes into a tunnel. The inevitable result was a loud boom caused by a wave of compressed air at the end of the tunnel.

What would be a solution to this problem? An idea that emerged through a series of trial-and-error efforts was the image of the "kingfisher" bird plunging into the water with its long, narrow bill.

The team conducted experiments and analysis in order to determine that it would be reasonable to model the front part of the bullet train (500 Series) looking like the face of the kingfisher, specifically the bird's characteristic shape from its bill to its head.

The "bill of the kingfisher" that reduces impact when the bird hits the water—the "long nose of the bullet train" that travels at a high speed.

We, as passengers enjoy the quietness and comfort of the bullet train. Isn't it surprising that the secret behind is the formative design of nature?

## Communicate with...

The "C" of C-PRESS refers to the "C" of CMIC and the "C" of communication.

C-PRESS delivers a wide range of information with a focus on topics in the medical and healthcare fields.

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Supervised by Yoshihiko Mochizuki (Chairman of the Board of Directors at Medical Corporation Emilio Moriguchi, Director of the Shibaura Three One Clinic)

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**Kazuo Nakamura**  
Chairman and CEO, CMIC HOLDINGS, Co., Ltd.



**Takeshi Karasawa**  
Former Director-General for Regional Revitalization, Headquarters for Overcoming Population Decline and Vitalizing Local Economy in Japan, Cabinet Secretariat  
Project Professor, Graduate School of Media and Governance, Keio University  
External Corporate Director, CMIC HOLDINGS Co., Ltd.



## Establishing healthcare system for integrating healthcare and nursing care into daily life

As the novel coronavirus infection continues to spread with no end in sight, each country feels the necessity of reviewing and modifying the healthcare system. Japan has an excellent universal health insurance system but is facing a mountain of problems such as a declining birthrate and aging population and labor shortage, which will be important to the future operation of the healthcare system. Which healthcare system should we establish in a rapidly aging society? CEO Nakamura interviewed External Corporate Director Takeshi Karasawa, who has long devoted himself to improving the Japanese medical system as a bureaucrat in the Ministry of Health, Labour and Welfare, in order to find a path toward better healthcare system in Japan.



Challenges to the healthcare system highlighted by the novel coronavirus calamity

**Nakamura** Since the end of the Second World War, the average lifetime has increased rapidly in Japan and the Japanese have the longest life expectancy in the world. Establishment of world-class, excellent systems, such as a universal health insurance system and nursing-care insurance system, contributes to the longest life expectancy in Japan and you have played a key role in establishing these healthcare systems. The novel coronavirus disease pandemic highlights the issues of healthcare system in each country and I want to know your impressions about the Japanese healthcare system when compared with those of Europe and America.

**Karasawa** Not only the health

insurance and care insurance systems but also healthcare providers have played a very significant role in Japan. The number of beds per 1,000 people is about 13 in Japan and prominent among advanced countries: it is about 8 in Germany and about 3 in the US and UK, which is just about one-fourth of that in Japan (see Data [1]). Japan is often criticized for too many useless hospital beds but considering that European and American hospitals are facing bed shortage, I do not think that Japanese hospitals have too many beds at all.

**Nakamura** The situation is most dire in Europe and America. To begin with, a significant number of Americans do not buy any insurance. Especially in New York, young people do not afford to pay healthcare expenses and cannot undergo testing or treatment. With the prevalence of the novel coronavirus, such young people rush to their local hospitals at once and their hospital systems are on the verge

of collapse.

At this moment, Japanese hospitals somehow manage to maintain their level of care. But the novel coronavirus epidemic will clarify the problems associated with the Japanese healthcare and provide an opportunity to create future policies.

**Karasawa** A declining birthrate, aging population, explosion of elderly populations in large cities, overconcentration of population and industry in the Tokyo Metropolitan area, labor shortage, and utilization of ICT (information-communication technology) and AI (artificial intelligence) will definitely have a great impact on the Japanese healthcare and medical system. I admit that Japan has created a wonderful outcome, such as an increased average lifetime and the longest life expectancy in the world. However, I think the development of a socioeconomic system reflecting the outcome is the key to our success.

Integrating healthcare and nursing care into daily life

**Nakamura** I have been involved in new drug development in the pharmaceutical industry and succeeded in completing big projects in my own way. Japan is noted for its drug development in the world and I have self-confidence that I have contributed to society in terms of cure of disease. However, considering my age, I now strongly feel the importance of healthcare is not just simply treating disease but to live your life happily.

**Karasawa** As mentioned above, Japan has the longest life expectancy

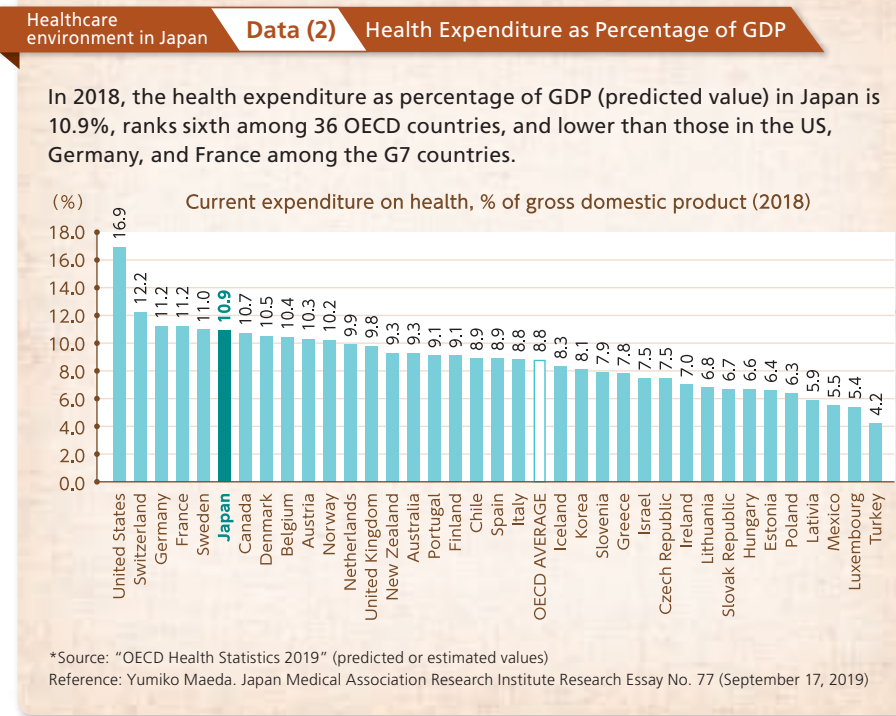
and is making a shift from treatment to livelihood support. Now patients see a doctor for treatment or drug prescription at the hospital but in the future, by utilizing ICT or AI, one's home itself will be like a satellite hospital or an institution that enables to integrate healthcare and nursing care into daily lives.

**Nakamura** That is a very good keyword. I also believe that what is important to an individual for living out his/her life includes not only healing diseases but also feeling happiness including well-being and a reason for living. Our business activities are supported by "CMIC'S CREED" inspired by the above thought.

**Karasawa** The CMIC'S CREED is simple, insightful, and splendid. As you mentioned before, I think providing support for people who want to continue living one's own life as oneself will also become important to the healthcare field.

**Nakamura** Apart from focusing on just being physically healthy, we also need to create some system to support both physical and mental well-being utilizing various technologies from a wide perspective (i.e., How should a person be and what can be done?). But at the same time, considering the current situation regarding Japan's declining birthrate and aging population, fewer workers will have to support a growing number of elderly people and we must also address cost problems.

**Karasawa** To be honest, I do not think that we need to reduce healthcare expenses so much. I mean that the healthcare expense, including nursing care, as percentage of GDP is now about 11% in Japan and not so high (see Data [2]). The problem is that how



to form the industry for supporting medical care.

The administration needs to cooperate with companies in developing a framework for connecting elderly people with the community

**Nakamura** Elderly people play a variety of roles in the community in the rural areas, whereas people working for a company have no place to go after retirement in the city and this is a big issue.

**Karasawa** In fact, many wives are exhausted because their husbands sit around inside the house after retirement. The municipal government of Nagakute City, Aichi, provides the retired with jobs, such as mowing, contributing to the community. They, making a connection with the community, can feel a sense of fulfillment even with

low payment expectations and this kind of activity is important.

**Nakamura** We will enter an era of 100-year lifespans. The important thing is to continue to work as long as possible after retirement to be in the part of the society. Despite little things, you should contribute to society and be paid in exchange for your services, which is also very important in terms of what makes life worth living. Please note that what I mean by saying being paid in exchange for your services is not a something managed by a unified standards, such as minimum wages, but based on the idea that you will be happy if you are paid in compensation for jobs you have done by fulfilling social functions. To satisfy social needs, companies need to create the environment required to hire elderly workers without seeking gain from that area. For example, I am planning to develop a framework for matching individual's personality with different

Healthcare environment in Japan Data (1) Number of beds per population in Japan

Japan has more hospital beds per 1,000 people than total hospital beds in advanced countries. However, the total hospital beds in Japan include psychiatric care beds (overlapping beds are also tabulated for Japan in the table given separately). The sum of beds for acute and rehabilitation care per 1,000 people in Japan is about the same level as that in Germany.

<https://www.jsicm.org/news/statement200401.html>

Per 1,000 people		(bed/per 1,000 people)					
	Year surveyed	Total hospital beds	Curative (acute) care beds	Rehabilitative care beds	Long-term care beds	Other hospital beds*	Psychiatric care beds
Canada	2018	2.5	2.0	0.1	0.4	0.0	0.3
France	2017	6.0	3.1	1.6	0.5	0.8	0.8
Germany	2017	8.0	6.0	2.0	0.0	0.0	1.3
Italy	2017	3.2	2.6	0.4	0.1	0.0	0.1
Japan	2017	13.1	7.8		2.6	2.6	2.6
United Kingdom	2017	2.5	2.1				0.4
United States	2016	2.8	2.4	0.1	0.2	0.1	0.2

\*Other hospital beds (others) and psychiatric care beds overlap with each other and overlapping figures are tabulated.  
\*Source: "OECD Health Statistics 2019" Some of the data are missing for the United Kingdom.  
Reference: Yumiko Maeda. Japan Medical Association Research Institute Research Essay No. 77 (September 17, 2019)



KAZUO NAKAMURA .....

activities without setting a retirement age by means such as setting up an agricultural corporation within the company. Although it is unrealistic to leave the framework development task completely to the local administration in terms of cost, I hope companies with the intention of conducting such activities can receive support from the nation. Do you have any idea?

**Karasawa** As you suggest, I also recognize the vital importance for one to feel his or her presence in both the community and society, and also being paid in compensation for jobs. It is not easy to encourage people living on a pension to spend their pension income freely to boost

consumer spending. They receive a certain amount of pension every month, which will never increase, and they try to save money. However, they will use the money they have earned to buy their grandchildren something or go traveling even if it is just several tens of thousands yen. This kind of activity will not make progress

**Making small-and-medium-sized hospitals act as a hub for regional revitalization**

**Nakamura** When I told an American visitor that there are no hospitals around Kobuchizawa, the visitor stunned me by saying there are many good hospitals within 30 or 40 minutes ride by helicopter and I realized there was a huge gap between our consciousness. Of course, there are many doctorless districts, posing problems in Japan, but viewed from a wider perspective, there are a great deal of local central hospitals with extensive facilities. Since then, I have started to think hard about how we can establish a support system for patients by utilizing this situation. Given that technological innovation promotes home care and helps patients receive treatment at the hospital only when necessary, I want to know how the Japanese healthcare

changes in the midst of this trend. **Karasawa** I am assuming that hospitals will be divided into two groups in the near future: Wide-area hospitals for high-level acute care and local multifunctional hospitals. Of these hospitals, local small-and-medium-sized hospitals having about 200 beds will play an increasingly important role as not only a base for comprehensive regional care but also a gathering hub for regional revitalization. For instance, Shimuraomiya Hospital located in Hitachiomiya City, Ibaraki, acts as a hub for various healthcare activities, such as secondary emergency care and nursing care, but also functions as a gathering place for local people through activities including a monthly morning market and community café. This kind of hospital is rarely seen in Europe and America. Our future challenge is to find a way to utilize not only the wide-area acute care hospitals but also help local people utilize wide-area acute hospitals and small-and-medium-sized hospitals offering wide range of healthcare services including secondary emergency care and nursing care. **Nakamura** I do not think that we always need to separate healthcare and nursing care from daily life especially in elderly people either. I want to create a framework so that healthcare professionals can help elderly people enjoy life and live meaningfully by utilizing ICT, AI, and other technologies. In that case, utilization of their data will be very important. It will be an ideal framework if there is a way to successfully incorporate not only disease and drug records but also data such as a reason for living or

contribution to the community, and this should help to live a life naturally without thinking in cooperation with the community **Karasawa** Utilization of ICT or AI will make substantial progress in leading a healthy and meaningful life and finding a sense of purpose in life. This is an area where CIMIC can make use of its broad findings and expertise, and it will become a world model, originating in Japan. CIMIC is a very unique company committed to clinical development and manufacturing of new drugs, clinical trials at the hospital, and healthcare activities for each family, involving upstream and downstream operations. I think the great advantage of CIMIC is that we focus on the family healthcare, and I hope that CIMIC, utilizing this advantage, will create a new lifestyle so that patients are able to receive support ranging from health supervision to anything they want to do without making an outpatient visit every week.

**For inheriting a local culture**

**Nakamura** Japan indeed has a variety of local cultures. The preservation and inheritance of these cultures without destroying them will make Japanese people energetic. I find it meaningful for people, men or women of all ages with different occupations participate in events, such as the New Year holidays, the day before the calendrical beginning of spring (setsubun), summer festivals and such together **Karasawa** Exactly. I think it is against the natural providence to gather

only small children in the nursery schools and kindergartens, or gather elderlies at the nursing home. Mingling with people from different generations and sharing the same place with children and elderly people are ultimate diversity. Although small in number, such institutions have been established. Mingling with others is fine. **Nakamura** I have visited a nursing home known for mingling with others and everyone looked energetic. If elderly people who have plenty of time to look after children instead of their working mothers, the elderly people will find a sense of purpose in life and mothers will appreciate their help. However, no infrastructure has been constructed for that purpose and “festivals” may be the best place for different people to gather around. I propose providing services such as carrying festival tools on a trailer. It is a kind of “festival delivery” for holding a festival on demand everywhere (laugh). **Karasawa** Local cultures will not survive unless you make such efforts. Promotion of local cultures is also important to stimulation of local economy.

**Spread of the novel coronavirus infection becomes an opportunity to raise individual awareness**

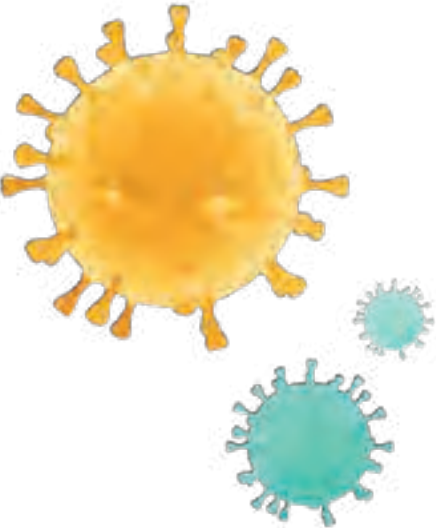
**Nakamura** The outbreak of the novel coronavirus has become an opportunity to regard disease as a



..... TAKESHI KARASAWA

problem for ourselves, not for others, and made the Japanese realize the importance of health. We will learn a lesson from this experience. Lastly, please give us advice on what we should consider for the future of Japan. **Karasawa** As you mentioned before, Japan has a very excellent medical system characterized by a universal health insurance system but taking this opportunity, we, Japanese should first realize that this universal health insurance system is not common. We should also give a thought to what it takes to maintain this outstanding system. This will also help find out what is important for life and is a good opportunity to reconsider one’s lifestyle. **Nakamura** I have heard that Japan is superior in diet and health and this appears to be largely dependent on its healthcare system. I hope that everyone will use this opportunity to gain and utilize knowledge about health and lead a life so that they can manage their health and enjoy life in their own way. Thank you for joining me today.

This conversation took place on March 31, 2020.





## Unconscious bias ubiquitous in our daily lives

"Unconscious bias" refers to a "preconception, prejudice or biased assumption that one has that one is unaware of." Have you ever had experience like things work out negatively despite of your good intentions, or hurting someone's feelings though you meant well? The reason this occurs is very simple: this can happen whenever you and others "see things differently." When your version of the story differs from their version, unpleasant emotions can arise within the other party, resulting in significant impacts on people and organizations.

## No one is free from unconscious bias

Below are some examples of things that people often do in their daily lives.

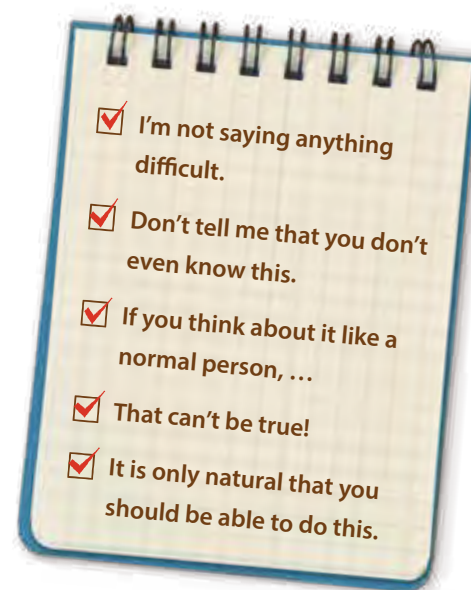
- ✓ Judge someone's personality according to their blood type
- ✓ Guessing whether someone can drink a lot based on where the person is from
- ✓ Assuming that the person is talking about his/her father when someone says that his/her parent is living away from home on a job assignment (= not about his/her mother)
- ✓ Sometimes saying things like "It is normal that ..." or "Usually, ..."

In fact, all of these behaviors are affected by unconscious bias. The truth is that no one is free from unconscious bias, and having unconscious bias is no problem in and of itself. The problem lies in people's refusal to recognize their own unconscious bias.

The culprit behind this is "self-defense," which is caused by the human brain's tendency to avoid stress by interpreting things to one's own advantage, such as "I am right" and "I am not to blame."

## People unconsciously presume and impose ideas on others

It is difficult to be aware of your own unconscious bias because it is "unconscious." However, this bias shows up in your words and actions, such as in the form of "presumptions" and "impositions." People tend to "presume" things and "impose" ideas on others in order to put their own convenience before that of others and to satisfy their own needs—without realizing what they are doing. For example, have you ever felt any of the following (refer to the checklist)? Even if many of the items apply to you, it is not a problem.



This is because what is most important is "whether you are aware" and "whether you are willing to be aware" of your words and behavior. To some people, none of these may apply. Such people are urged to continue to question themselves—"Is it possible that I have any other preconceptions?" or "My colleagues and superiors at work, as well as my family members and friends, may have such presumptions." It is difficult to move forward if you cannot recognize

these issues in yourself.

It is important that each individual squarely faces each matter at hand. Once you get away from your own perspective, you can see things from the perspectives of others.

## Pay attention to the "mental aftertaste" your words may leave with others

How would you feel if someone says the following to you?

**You are a serious person!**

In fact, this phrase is known to create markedly different impressions on different individuals. Some will be "pleased," while others will be "shocked to be labelled uninteresting." Some people feel flattered if a team member at work says these words, but they may also be the last words that someone wants to hear from their friends. Meanwhile, some people may feel nothing. The point is, even the same words can make different impressions depending on the "past experience" and "perspective" of

the people who hear them. After all, it is always up to the person to whom you are speaking to interpret your words, no matter what your actual intention was. The "mental aftertaste" (pleasant or unpleasant feeling) that your words leave depends on the person and the situation. Even when one hundred people have the same interpretation of what you have said, the 101st person may not.

## First change yourself before trying to change others

One question I have been asked many times in training and lecture programs is this: "When I want to make others aware of their unconscious bias, how can I do so?" My answer is: "There is no way to do that." It is great that you can talk about your

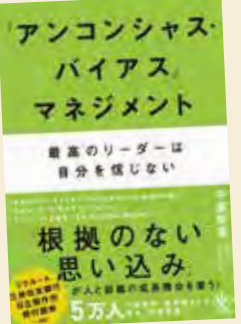
own unconscious bias, such as "I have realized this unconscious bias that I have." However, it is not advisable to force others to do so. Imagine how people feel when someone criticizes them with words like, "You are presuming and see things in a biased way." This judgmental behavior can lead them to shut their minds off. I believe that when individuals who have learned about the concept begin to set good examples for others by proactively disclosing their own "unconscious biases" and showing others how they are trying to change themselves, they will gradually involve the people around them, resulting in a better social environment. To this end, the first step is to be aware of your own "unconscious bias."



Tomotaka Moriya

Representative Director of Moriya Consulting Co., Ltd.  
Director of the Unconscious Bias Laboratory

Tomotaka Moriya was born in Osaka in 1970 and graduated from Kobe University with a master's degree. After working for TOSHIKEI Co., Ltd. he participated in the launch of a human resources consulting firm in 1999 and implemented many leadership training programs. Since founding Moriya Consulting Co., Ltd. in 2015, he has engaged in the development of over 50,000 leaders, mainly those in managerial and executive positions. In 2018, with the aim of creating a society that can energize each and every member, he established and became the Director of the Unconscious Bias Laboratory. To date, more than 50,000 people have participated in his Unconscious Bias training.  
<https://www.moriyatomotaka.com/>  
<https://www.unconsciousbias-lab.org/>



"Unconscious Bias" Management  
The best leaders do not believe themselves (KANKI PUBLISHING INC.)

# Unconscious Bias ...

# Realize the "unconscious bias" within you

In recent years, the concept of "unconscious bias" has been increasingly covered in business magazines, newspapers and TV programs. Why is it attracting more attention now? The largest reason is that diversity now plays a more important role than ever in organizational growth. A "one size fits all" management approach does not allow every team member to work vibrantly. Ungrounded assumptions can worsen personal relationships and inhibit teamwork. Let's hear what Tomotaka Moriya, a management consultant and Japan's leading authority on unconscious bias, has to say.

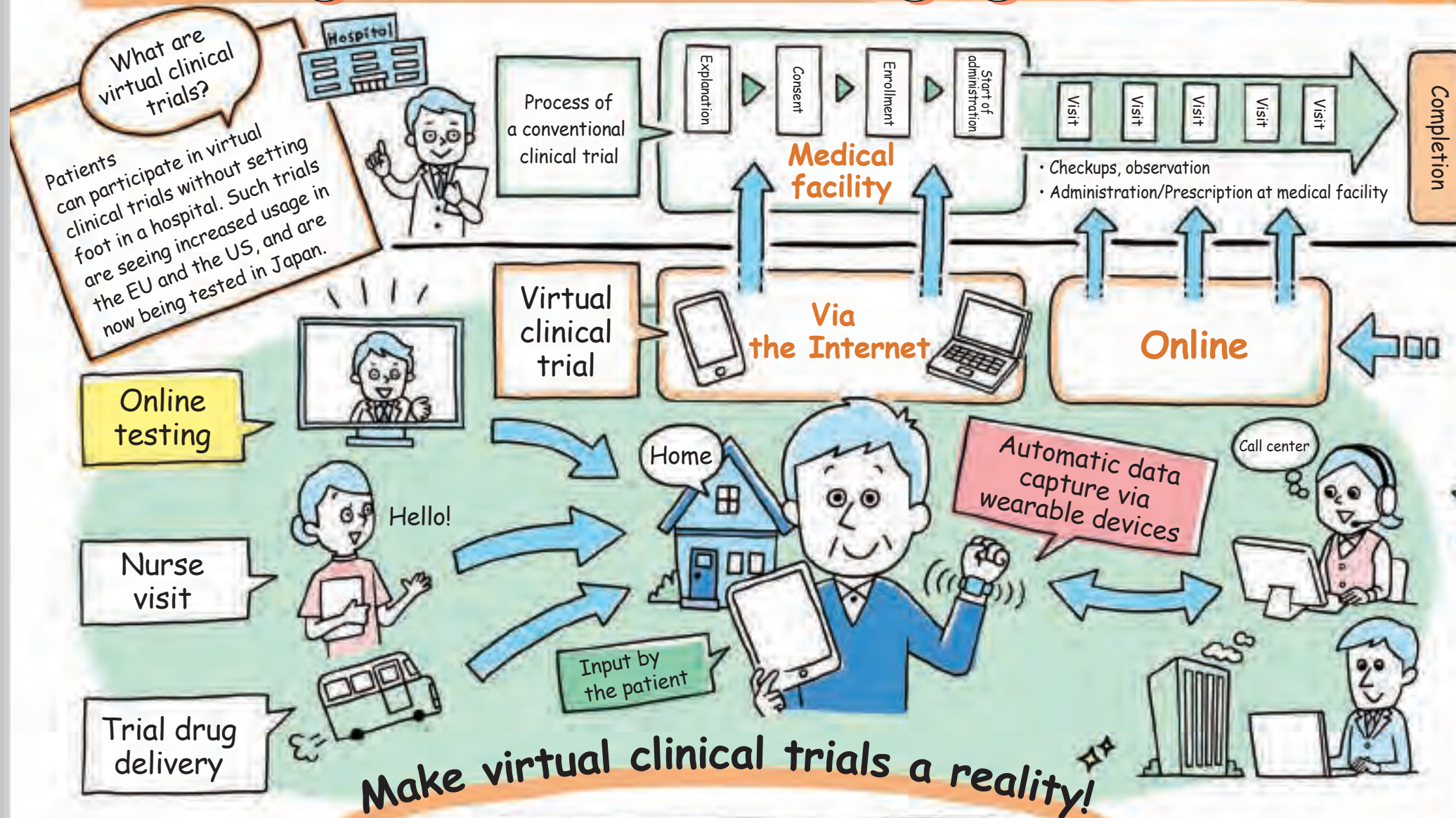


What impressed me most about his talk was the expression "mental aftertaste," which you may leave on others and which you should pay close attention to. We easily forget that different people have different ways of thinking and different perspectives. Everyone has unconscious bias; no one can be free from it. However, I think that we can bring about changes in our own responses simply by realizing the existence of unconscious bias and becoming a bit more aware of it.

Kyoko Kanamaru, Corporate Officer in charge of Group Diversity Promotions, CMIC HOLDINGS Co., Ltd



# How Digitalization Is Changing Clinical Trials

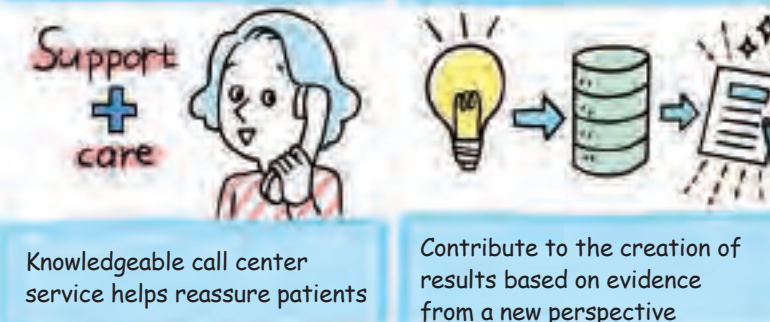
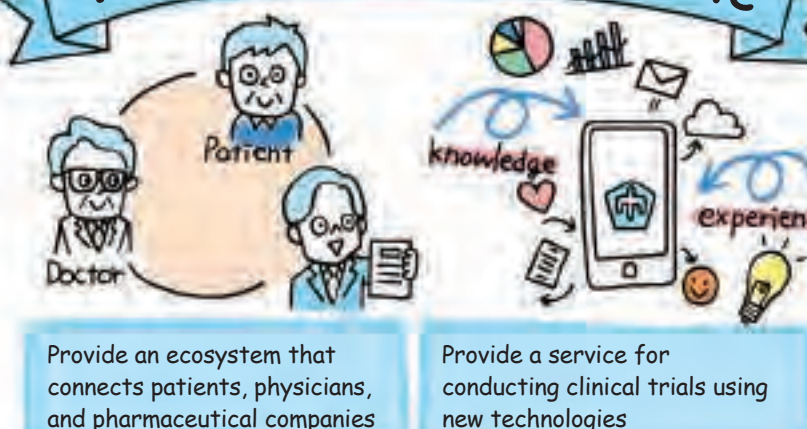


## Technologies that enable virtual clinical trials

- 1 Online testing**  
Physicians can test patients via the Internet, reducing the need to visit medical facilities and enabling long-distance testing
- 2 IoT-enabled healthcare devices**  
Enables day-to-day data collection via mobile technologies
- 3 ePRO (e.g., digital patient diary)**  
Patients can report their own symptoms to improve data quality and achieve real-time data referencing

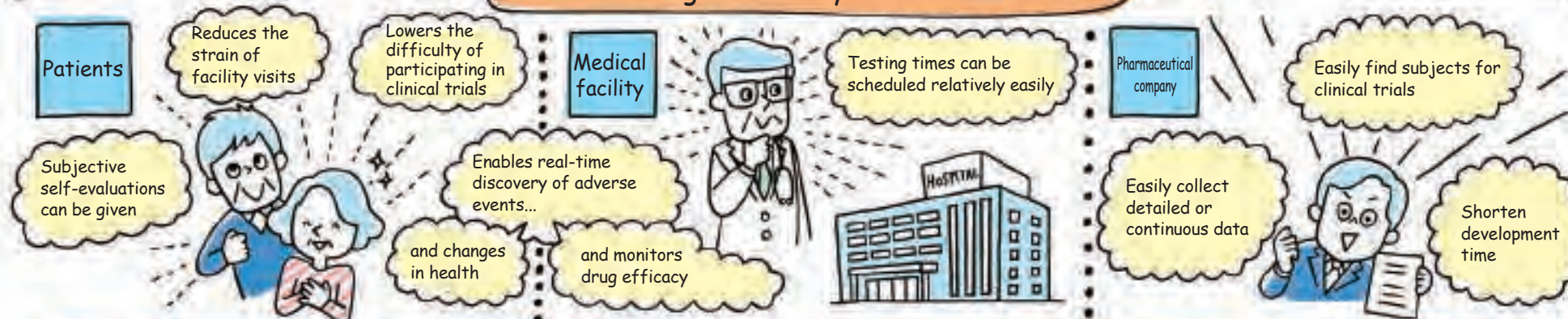
Having an all-virtual method also means that we can have a "hybrid method" that combines conventional clinical trial methods to reduce the number of facility visits

## Where CMIC can contribute



Promote open innovation with various industries

## Benefits brought about by virtual clinical trials



Make patient-centered medical care a reality with digital technology!



## Q What are virtual clinical trials?

Different from conventional clinical trials in which patients must be tested at a medical facility, virtual clinical trials collect data using online testing, ePRO (electronic Patient Reported Outcome), and wearable devices. This enables the trial to be conducted from home, eliminating the need to visit a facility.



## Q Why are virtual clinical trials attracting attention?

There is an increasing need to reduce the length of clinical trials by preventing trial discontinuation as well as to efficiently enroll subjects. This is due to rising development costs for new drugs as well as the shifts to drug development for rare diseases and personalized medicine. Virtual clinical trials and the technologies that

enable them are attracting attention as potential solutions. Subjective evaluations of patients using ePRO and wearable devices, in addition to the continuous data collection enabled by these devices, are potential avenues of growth for clinical trials.

## Q What are the benefits of virtual clinical trials?

A major benefit is that patients do not need to visit a medical facility. For instance, patients do not have to worry about making visits, which lowers the barrier to entry for people who may otherwise discontinue the trial due to work obligations. Thus, pharmaceutical companies have an easier time recruiting subjects, which leads to a shorter clinical trial period. In addition to making it relatively easier for the clinical trial physician to set schedules for testing by conducting tests online, this approach facilitates more detailed testing if needed. On

the other hand, issues include patient apprehension with regard to not conducting tests in person as well as the patient's technical literacy regarding digital devices. In addition, few physicians are used to online testing, and they may be overwhelmed by the different devices and systems used for each clinical trial. To remedy this, pharmaceutical companies must prepare the necessary systems, devices, and platforms, thus laying the groundwork to smoothly conduct virtual clinical trials.

## Q What are CMIC's initiatives for virtual clinical trials?

Conducting clinical trials virtually is a solution that has great potential, but currently this approach is seldom used in Japan, and many pharmaceutical companies have not built up the knowledge to do so. CMIC, which has a hand in approximately 80% of all drugs developed in Japan, is proactively seeking to develop this capability based on the knowledge it has collected regarding the needs in

individual disease areas, the potential to realize this capability, and interpretation of laws and regulations. Instead of staying within the role of a CRO, CMIC will promote open innovation by collaborating with industries that have access to leading-edge digital technologies needed for virtual clinical trials. This will in turn lead to the provision of additional solutions.

## CMIC and MICIN seminar on virtual clinical trials for the pharmaceutical industry

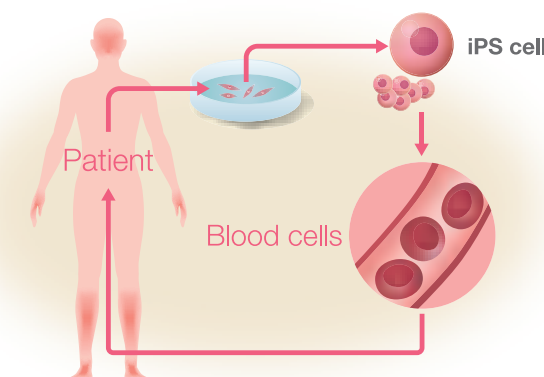
In January 2020, CMIC and MICIN held a seminar on conducting virtual clinical trials in Japan entitled "Trying Out Virtual Clinical Trials: Digitalizing Patient-Centered Trials." The seminar discussed the needs in individual disease areas, the possibility of holding virtual clinical trials,

interpretations of Japanese laws and regulations, and the development process of an online testing tool for virtual clinical trials under open innovation. In addition, there was a demonstration of a virtual clinical trial using the online testing service "curon" developed and operated by MICIN.

## CMIC jointly won the Minister of State for Science and Technology Policy Award at the Japan Open Innovation Prize

### Producing blood in factories—Aiming to commercialize regenerative medicine using iPS cells

In February, 2020, CMIC, as part of a group of five companies (Megakaryon Corporation, Otsuka Pharmaceutical Factory, Inc., Kyoto Seisakusho Co. Ltd., Satake Chemical Equipment Mfg., Ltd., and CMIC Holdings Co., Ltd.), won the Minister of State for Science and Technology Policy Award at the Second Japan Open Innovation Prize, which is hosted by the Japanese Cabinet Office, for "Producing blood in factories—Aiming to commercialize regenerative medicine using iPS cells." Encouraged by this award, we will continue to strengthen our collaborative relationships with the other companies; to further contribute based on our experience, know-how and knowledge obtained over many years in pre-clinical and clinical trials; and to strive to the utmost to provide patients with the required medical care as soon as possible.



## CMIC and SUSMED launch simplified analysis solutions for big data using AI

In January 2020, CMIC and SUSMED, Inc, which conducts research and development on digital therapies, began offering simplified big data analysis solutions using AI that enable researchers to rapidly obtain valuable insights into big data, including real-world data (RWD). CMIC performs data cleansing\* on pharmaceutical companies' RWD and other big data in order to enable simplified analysis, then the data is put through SUSMED's automated AI analysis systems, allowing for simplified analysis that is faster than conventional processes. These solutions are expected to contribute to shortening the time needed to set up clinical trials and to perform analysis for academic publications.

\*A process to improve the quality of the data and rendering it suitable for analysis. Identify repetition, mistakes, and inconsistent notation within a database, and these will be deleted, revised, or normalized.



**CMIC Group promotes open innovation with partners from various industries to contribute to creating new value and resolving challenges.**

**Certified as an "Excellent Enterprise of Health and Productivity Management—White 500" again in 2020 (the third consecutive year)**



Excellent Enterprise of Health and Productivity Management 2020 (White 500)

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<https://en.cmicgroup.com/news-events/>

