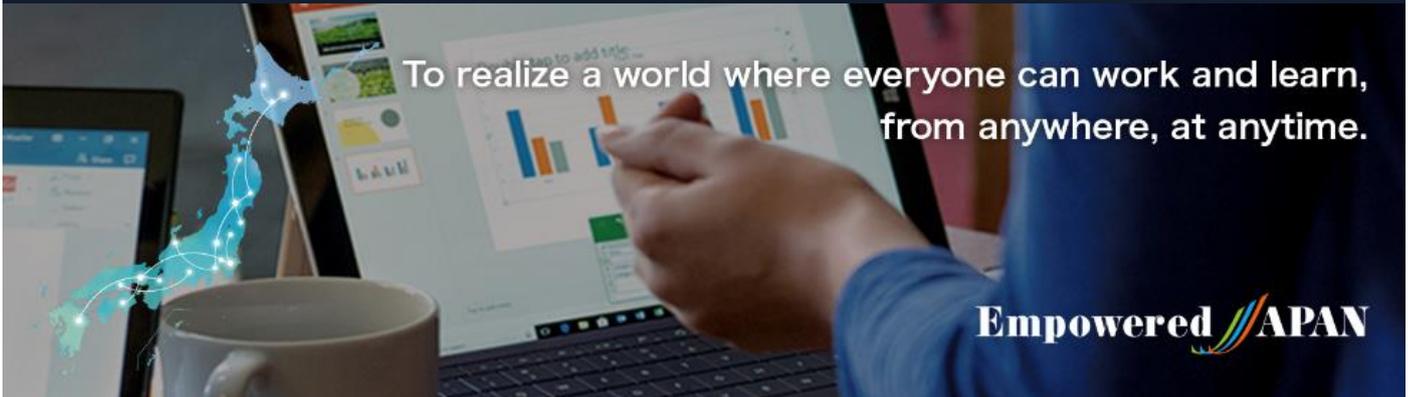


Empowered JAPAN Webinar Report



Empowered JAPAN Executive Steering Committee was established in 2018, "To realize a world where everyone can work and learn, from anywhere, at anytime." To promote the true value of workstyle innovation including telework, the committee has been coordinating symposiums in both Tokyo and regional cities. And in collaboration with various local governments, Microsoft, and partners, the committee has been serving as an advisor to provide telework training for both corporate and individuals. In response to the spread of infection of corona virus (COVID-19) and the government announcement on February 25, 2020, which included the request to citizens to telework, the steering committee made the decision to launch a series of free webinars starting from March 17, 2020, to provide practical information for individuals and organizations across the nation, to telework and/or practice online education.

Category : Contents for government, healthcare, and educational institutions.

Date : March, 30, 2020

Speaker : Kengo Miyo

National Center for Global Health and Medicine/Director of Center for Medical Informatics Intelligence/
J-DREAMS information representative
Visiting Professor of the Tokyo university of technology and Nagasaki university



Mr. Miyo was hired as an assistant in the central medical information department of the University of Tokyo Hospital in 1998. After that, he became vice director of the department of medical informatics, Kobe University Hospital, then director of the University of Tokyo Hospital Department of Planning Information and Management, and now he is chief medical informatics officer of Center for Medical Informatics Intelligence. He has studied abroad at Peter L. Reichertz Institute for Medical Informatics, Germany, and is familiar with the medical information situation in Europe. At Medical Information System Development Center he is chairing the privacy mark review board in the medical field. He specializes in medical informatics and doctor of medical science.

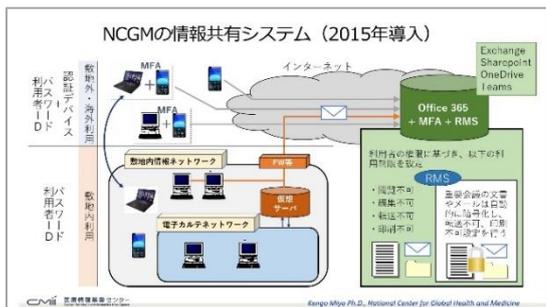
Possibility of telework for medical institutions: Work and conference and research

Starting with the examination of more than 650 returnees from the city of Wuhan, the National Center for Global Medical Research (NCGM) is at the forefront of treatment and research on COVID-19. The NCGM has many specialists for infectious diseases. Dr. Miyo, holds a PhD in medicine and specializes in medical informatics. He is the Director of the Department of Medical Informatics, which is the NCGM's medical information department. Through ICT, the department supports organizations that are committed to the fight against COVID-19.

"We use teleconferencing for discussions with the World Health Organization (WHO), as well as the NIH (National Institutes of Health) and CDC (Centers for Disease Control and Prevention), both of which are located in the United States," says Dr. Miyo. "In addition, it is difficult to access the negative pressure treatment room which requires strict protective gear. We use Teams' split screen for four people in order to communicate between the treatment room and the staff room. "As a countermeasure against COVID-19, the NCGM is using Teams for the following kinds of usage scenes, including the content discussed by Dr. Miyo after giving a lecture at Empowered JAPAN.

Usage Scene	Before	After
Communication between medical personnel inside and outside of negative pressure rooms where critically ill patients are being treated	People entering the room are required to wear protective gear and take a variety of preventive measures against COVID-19. Therefore, once entering the room, it is difficult to exit, and it was difficult to communicate with staff on the outside	Utilizing Teams' web conferencing made it possible to exchange necessary information in real-time between medical personnel inside and outside the negative pressure room
Communication between hospitalized patients with mild symptoms and medical staff	There was an increase in the use of masks and protective gear which have to be worn each time to prevent infection. This created concern about procuring gear and managing inventory	Utilizing Teams' web conferencing made it possible to communicate with patients without actually entering/exit hospital rooms, thus conserving gear for protecting against infection
Committee for swift decision-making and widespread communication	Because main hospital staff gathered in the same conference room, there was a risk that if even one of the attendees was found to be infected with COVID-19, all attendees would be classified as being exposed to high-risk contacts, and would be suspended from work	Utilizing Teams' web conferencing made it possible to build a decision-making system which eliminates the need for main hospital staff to gather and avoids the three modes of infection

When thinking of telework by medical institutions, people immediately imagine on-line medical treatment and remote surgery. However, in reality, there is an enormous amount of various work, research, and conferences that accompany medical treatment. The efficiency of work through the use of ICT and telework is also an urgent issue. The NCGM is gradually starting to implement telework starting from staff for whom telework is possible. According to Dr. Miyo, the foundation of starting telework is the implementation of ICT for the entire center, which has been under way for five years.



The NCGM introduced Office 365 E1 in 2015 and provided accounts for all of its approximately 3,000 employees. One year after the introduction, almost all meetings are held in a paperless format.

"The number of conferences (at medical institutions) is almost unbelievable," exclaims Dr. Miyo. "Although medical institutions should spend more time attending to patients than holding conferences, many of these conferences are required by laws and regulations. Since the number of meetings can't be reduced, I decided that our only option is to improve efficiency."

In principle, NCGM staff do not print out meeting materials; instead, they upload them to SharePoint and they view them on a screen. Replacing materials is easy

and there is no need for reprinting, so the creation time is greatly reduced. Furthermore, the materials are automatically archived, so there is no hassle associated with storage, organization, or searching. The NCGM has also created a conference room reservation system simply by using the basic functions of Office 365. "We accomplished this by defining one conference room as one person and then sharing the conference room schedule with everyone," says Dr. Miyo.

Even staff outside of the NCGM or on an overseas business trip can check the meeting materials in real-time. Conference rooms can be reserved at anytime and from anywhere. In this sense, the NCGM has already succeeded in implementing part of telework.

Although paperless meetings and conference room reservation systems are already commonplace at large private companies, such technology can be called an advanced effort in the case of medical institutions. Dr. Miyo says that there have been improvements in security, which is a more important issue at medical institutions than at companies. As opposed to paper materials which are difficult to manage, it is easy to set restrictions on access, editing, downloading, and printing in the case of digitized materials. According to Dr. Miyo, the extent to which telework will progress at medical institutions depends on ensuring an appropriate level of security. An important element of security is multi-factor authentication (MFA), which is used when accessing information from outside of the NCGM. At the NCGM, each work smartphone requires an additional verification. "We do this because anyone will notice if they lose their smartphone, but won't notice if their password is stolen," explains Dr. Miyo. "In this way, we are visualizing risks."

If there is suspicious communication on a smartphone, it will be automatically blocked and a notification will be sent to the security response team for Teams. Members of the team write their response status in Teams, and it is stored as a response record.

As a result of these efforts, the NCGM suffered no damage during the 2018 phishing e-mail incident, while many universities, etc., had their IDs and passwords stolen. By reporting these results within the NCGM, Dr. Miyo and his colleagues have furthered increased recognition for the need of MFA and other technology within the organization.

Dr. Miyo points out that failure for an organization to implement ICT will lead to individual employees and departments using IT at their own discretion—which actually increases risk. It is necessary to recognize that risks will always exist, to appropriately evaluate those risks, and to implement responses. "We define the rules (such as mandatory use of MFA) and then trust other parties to act appropriately," explains Dr. Miyo. "We expect people and departments throughout the NCGM to share the necessary information among themselves. Teams is being used even more than we expected. I have even heard of nurses who ask to attend meetings from their homes via Teams."



ICT is increasingly used in research fields. A leading example is the Japan Diabetes comprehensive database project based on an Advanced electronic Medical record System (J-DREAMS), which is led by Dr. Miyo. A total of 55 medical institutions (including the NCGM) from throughout Japan participate in this project. Data from the medical records of more than 60,000 patients is rendered anonymous and then shared among participants. J-DREAMS is used to develop new drugs and identify risk factors for complications.

Dr. Miyo was appointed as Director of the Department of Medical Informatics in January 2015. At that time, he did not have a single staff member; just a room with desks and chairs. There was not even a computer. The department had

almost no personnel or budget. "Even so, as long as you have allies and ideas, you can always start from what is possible," says Dr. Miyo.

He started by cultivating like-minded individuals from within the NCGM. Specifically, he began by searching each department for staff who are certified as Healthcare Information Technologists. He then asked the certified staff to take on the concurrent role of information managers. Dr. Miyo gathered individuals who have always had a proactive mindset towards ICT and fostered a sense of fellowship. His group has succeeded in contributing to the organization while keeping costs low, thus earning trust from colleagues and rising to their current position. The NCGM originated from a provisional military hospital that was established in 1868. The NCGM has a long history. It still retains medical records from the Spanish Flu, which raged across the globe about 100 years ago. "The essence of medical care is information sharing," says Dr. Miyo. "Even in the case of surgery, where techniques tend to be the focus of attention, the best surgeons excel at thoroughly gathering information in advance and making surgical plans. I believe that even better medical care can be achieved by writing down information, and then saving that information to be shared and used in medical treatment."