Saiseikai Kumamoto Hospital engages in medical activities rooted in the community, under our philosophy of contributing to the local community through medical care. Providing world-class medical care is part of our medium-term business plan. As one of the initiatives to achieve this goal, we are improving communication in our organization by using Microsoft Teams.

Administrative work isn’t limited to hospital clerical staff; medical staff members are also required to do such work, which makes information sharing across job types and departments essential. Streamlining administrative work and information sharing will help medical staff concentrate on their primary task of medical care, resulting in improvements in the quality and safety of medical care. Furthermore, we expect this streamlining to help reform the work style of all our employees, not just medical staff.

Putting comprehensive team treatment into practice

Efficient work style is the foundation of high-quality medical care. As such, our hospital is continuously seeking ways to simultaneously improve the quality, efficiency, and work style of the medical care we provide. Doing this requires well-established teamwork and a certain amount of segmentation and modularization. At the same time, we need connections to visualize all these aspects, and communication is the best platform to create those connections. In 2013, our hospital became the first public hospital in Japan to receive accreditation from international medical care evaluator Joint Commission International (JCI). In addition to rating the quality and safety of medical care, JCI also has a strong focus on communication.

With Microsoft Teams, our employees can discuss separate topics in a chat format and easily share various materials. Sending, gathering, and organizing information is easier, and we knew it would help improve communication. We had huge expectations of Teams as a
solution for increasing patient contact time and improving our work.

To improve communication when carrying out medical care, our hospital established a system of “comprehensive clinicians.” We’ve been evaluating this system as a new way for doctors to work since April 2017. Comprehensive clinicians are positioned as the hospital’s general practitioners, performing support work across departments and positions. To provide comprehensive, safe, and secure medical care, those doctors are permanently stationed in the relevant ward so that they can manage patient health and quickly perform the initial response if there is a sudden change; they also hold cooperative conferences involving staff from various positions. For example, stationing comprehensive clinicians in the orthopedic ward allows orthopedic surgeons to devote their time to surgery. We believe that this structure allows each member of the medical staff to fully demonstrate his or her professional skills.

Using Microsoft Teams to communicate in a disaster

Our Nursing Department, Clinical Engineering Department, Radiology Division, and Director’s Office have already started using Teams. In the Nursing Department, we created teams for each ward (30 to 40 people); these teams use the platform to send messages about duties for the next shift, which has shortened the time required for morning and evening liaison. The Clinical Engineering Department uses Teams to share information such as minutes and equipment manuals/safety precautions. And the Radiology Division uses Teams to discuss operations and collectively edit files such as work rosters and meeting schedules created with Microsoft Excel.

At present, each department is using Teams to exchange work management information; it’s not yet used to handle patient information. In Northern Europe and other countries, patients’ personal information is handled using cloud services in a secure environment. However, to do this in Japan will not only require work on the technological front, including adopting reliable cloud services, it might also require developing new legislation that is easier for patients to understand.

When the Kumamoto earthquake occurred in April 2016, the power to our server room was cut. Because the emergency power supply gives preference to life support devices, the server room power was out for about two hours. Even though our business continuity plan met JCI standards, we had no choice but to use paper medical records rather than our electronic records. If our medical record data had been stored on the cloud, the situation would probably have been different. Although our staff was also caught in the earthquake, they were able to contact each other through email, mobile apps, and other methods, and more than 600 staff members rushed to the hospital voluntarily.

To exchange and share information in a more controlled manner in a disaster, the staff would ideally use a hospital-managed system. As a result, we want employees to become accustomed to Microsoft Teams through regular use.
Adopting voice input and AI for a higher quality of medical care

Our hospital has many specialized systems for various aspects of treatment, including electronic medical charts, dosage, radiology scans, and blood tests. In addition, much like general businesses, we have systems for business management such as personnel and accounting, as well as network and security systems—close to 100 systems in total. Microsoft products such as Windows and Office are the platforms we use for most of these systems; we expect that enhancing Microsoft products and using them effectively will strengthen our overall organizational structure.

For example, I believe that we can streamline data input work and prevent incorrect entries and omissions by incorporating voice input to enter sentences into the system, as well as construct mechanisms to support data input, such as using AI for accurate recognition of medical terms. As procedures such as surgery, angiography, and endoscopy sometimes require both hands, being able to use your voice to enter information into the system on the spot will eliminate the need to perform input work after the procedure. Also, completing the data entry process by immediately converting voice input to text and making a few corrections will reduce the amount of work and the time required. Currently, nurses enter doctors’ instructions in real time, and the doctors record the sections concerning final medical determinations themselves.

Because the doctors’ primary job is to work in operating rooms, increase their skills, and provide those skills to patients, we need to consider ways to streamline all other work that they are involved in.

I also believe that IT-based judgments are fairer than those made by people. To ensure an impartial distribution of medical resources, AI may be appropriate in areas such as determining insurance coverage.

Technology for valuable world-class medical care

As robots continue to learn about various cases through deep learning, in the future, robots may make clinical determinations instead of doctors, who will excel at surgery. We can also imagine a world in which doctors monitor robots just to ensure that they are performing as required. It may initially seem like fantasy, but robots are already inserting catheters and performing contrast radiography.

For the value of medical care to spread far and wide, I believe that everyone being capable with no variation will become extremely important. Nurturing medical personnel is one of our fundamental policies, so we emphasize training from that perspective. We are involved in training medical staff, which includes accepting more than
1,500 interns per year, and we incorporate advanced technologies such as endoscopic surgery using Microsoft HoloLens and other simulators.

In a world with this kind of advanced technology, adopting Microsoft Teams may be an initial step, but I think that it’s a significant one in terms of managing medical information in the cloud, even if it’s ultimately only part of the process. We don’t think we will change the world; we simply hope to grow steadily while contributing to the community. As we continue to improve the quality and efficiency of medical care as well as our work style, we will actively incorporate Microsoft Teams and other IT, IoT, and AI solutions as a part of Saiseikai Kumamoto Hospital.

“As we continue to improve the quality and efficiency of medical care as well as our work style, we will actively incorporate Microsoft Teams and other IT, IoT, and AI solutions as a part of Saiseikai Kumamoto Hospital.”

— Koichi Nakao  
President and CEO  
Saiseikai Kumamoto Hospital

Implementation Inquiry
This case study can also be accessed via the internet.  
https://customers.microsoft.com/

Please note that the information contained in this case study was current as of the time of writing (December 2018) but may no longer be up to date.

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