

Nagoya University School of Medicine — Current Status and Prospects

In 2024, Professor Shoichi Maruyama was appointed to the hospital director of Nagoya University Hospital, and Professor Tetsuya Ishikawa was appointed the head of the School of Health Sciences and director of the Graduate School of Medicine, School of Health Sciences. Professors Maruyama and Ishikawa, along with Hiroshi Kimura, dean of the Graduate School of Medicine, exchanged opinions on the current status, issues, and future prospects of the Nagoya University School of Medicine.



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Kimura: I've heard that when Prof. Maruyama became the hospital director after Dr. Kodera in FY 2024, the hospital executive team was completely renewed. Prof. Maruyama, please tell us about the current status and issues facing the hospital.

Maruyama: Nagoya University Hospital (commonly called Meidai Hospital) has the fundamental philosophy of *contributing to society through medical care, education, and research*. Medical care alone is daunting, but we must engage in education and research at the same time. Meidai Hospital is also the most trusted hospital in the region, so I think we need to fulfill this important role. Currently, work-style reform is an ongoing issue, but the biggest challenge for us right now is that we must implement medical care, provide an education, and conduct research with limited human resources.

Kimura: I think that work-style reform is a nationwide issue, but do you have any issue unique to a university hospital?

Maruyama: Even general community hospitals focusing on medical treatment are struggling with work-style reform. However, medical treatment up until now has involved overwork by doctors. So, I think that normalization of the work style will move the situation in a generally better direction, but we will have something impossible to do in the process of normalization. Because we cannot neglect the treatment of patients in front of us, we have to spare education and research instead, which is our biggest concern. Meidai Hospital was established as a research university, in particular, so I think we must avoid undermining research at all costs. However, it is very difficult to maintain a balance.

Kimura: I've also heard that when Prof. Ishikawa took over the position of head of the School of Health Sciences from the former head, Prof. Hoshiyama, the executive team was completely replaced like Prof. Maruyama did at Meidai Hospital. Prof. Ishikawa, would you tell us about the current status and issues facing the School of Health Sciences?

Ishikawa: We continue to implement the policy adopted by the previous head, Prof. Hoshiyama, that the School of Health Sciences aims to *cultivate healthcare scientists capable of globally competitive research in a next-generation digitalized society*. Nagoya University School of Health Science offers all five specialization programs of Nursing, Radiological Technology, Medical Technology, Physical Therapy, and Occupational Therapy, generally classified as health sciences. The programs are rare even among national and public universities. In accordance with the 2012 change of the entire university to a graduate school-based institution for research and education, we decided to change the organization of the graduate school to follow suit. In the

2020 reform, we unified the organizations of the graduate school, which had been three Departments of Nursing, Medical Technology, and Rehabilitation Therapy. Moreover, we recently reorganized the graduate school to include the field of informatics and established the new Department of Integrated Health Sciences. While keeping some of the old system, we strengthened our research capabilities by introducing a unit system, which is substantially a small academic chair system, and continued to promote education and research that incorporated informatics up until now.

Informatization is occurring throughout society. Since medical informatics is also developing remarkably under such circumstances, in order to keep up with the trends, the Department of Health Sciences set a major goal to help students acquire the appropriate skills, knowledge, and information literacy as well as conduct research. The Convolution of Informatics and Biomedical Sciences on Global Alliances (CIBoG) was adopted, and our students also participate it and play an active role. Taking advantage of this situation, we would like to strive for world-class research and aim to foster human resources who will contribute to the development of next-generation information medicine and innovative advanced medical care. In addition, a future issue in the field of health and medical services is the increasing number of patients with chronic diseases due to the aging of the population. In order to deal with this, we must also consider the establishment of next-generation preventive medicine and personalized prevention. I would like to continue our research and human resource development while aiming for this as our goal.

Kimura: I believe you are taking the lead in the organizational reform of the Department of Health Sciences, but do you have any barriers when putting the reforms into practice?

Ishikawa: We reformed the organization. However, since research studies are often conducted within the





framework of the old departments, we see some units not fully taking advantage of the unit system. Such cases make me feel that we have not yet spread the reform throughout the department. As for the significance of integrating the departments into one entity, one of the important goals is to proceed with interdisciplinary fields research, especially research that incorporates informatics. Faculty in the field of informatics are working very hard in education and research, but it is still incomplete as an organization. I consider it necessary to improve the system in order to solve such problems as this and further promote research that incorporates informatics.

Another issue at the Department of Health Sciences is the decrease in management expense grants, which are a major source of funding. The building that is being used since the days of the Nagoya University College of Medical Technology is quite old, and the equipment for education and research is aging and could break at any time. We are in the situation where repair costs place a burden on our budget. The only solution is to obtain more external funds. However, in order to make it happen, as I mentioned earlier, I think we must promote interdisciplinary fields of research by taking advantage of the fact that we have five specialization programs and the field of informatics. Graduation research and graduate student thesis presentations had often been made by each department, but with the idea that we should start with learning about research that was conducted in the Department of Health Sciences beyond the boundaries of the old departments, we started a workshop called the Health Science Research Workshop three years ago sponsored by the Department of Integrated Sciences. At the workshop, graduate students would introduce their research in the form of poster presentations, and faculty members would give special lectures as well. More than 40 graduate students make poster presentations every year, and they conduct robust discussions here and there together with faculty members. I hope that collaborative and interdisciplinary research will progress by getting to know each other through such opportunities and that it will lead to gaining external funds. Moreover, I would like to promote the collaboration with the Center for research,

education, and development for healthcare life design (C-REX), which Prof. Kimura referred to, and create a flow to obtain external funds.

Work-style reform and women's active engagement

Kimura: I understand that the biggest issue for Nagoya University Hospital is to reform the way doctors work. How do you plan to tackle this in the future?

Maruyama: Meidai Hospital announces four basic goals. First, *to provide high-quality, safe, state-of-the art medical care*, second, *to foster prominent medical professionals*, third, *to pioneer next generation medical technologies and care*, and last, *to contribute to the community and society*. There is a limit to how far an individual's efforts can go in implementing these basic goals. Therefore, I think it is important for the hospital to build a system to execute the goals systematically. For example, we are promoting medical safety mainly through the Department of Patient Safety, which consists of about 20 personnel. Our hospital obtained international medical certification from the JCI,^(*) and we are making every possible effort for this accreditation with all departments of our hospital. As such, we have a system in place where the whole organization will back up any areas where we cannot meet the requirements with individual efforts. Furthermore, the Department of Advanced Medicine provides consistent support for new medical care that will lead the next generation that ranges from basic research to clinical application. Up until now, individual doctors were making efforts alone, but now, experts from each field work together on new medical care. Meidai Hospital is the center of medical care and education for this entire region, including its affiliated hospitals, and its characteristics lie in collaboration with those affiliated hospitals. Therefore, I think what is important is not that Meidai Hospital tries its best alone but that it shares roles with the affiliated hospitals. For example, we may have a system where Meidai Hospital will treat patients with intractable diseases, while community hospitals treat patients with ordinary diseases. It is important to think about the balance throughout the region and make effective use of human resources. I believe that such a system will eventually lead to work-style reform. As Prof. Ishikawa mentioned earlier, medical information has developed significantly. So, I think that as a hospital, we must establish a system to systematically support more advanced techniques than ever before by using digital transformation (DX) and information communication technology (ICT) not by just leaving those techniques to individual abilities.

Kimura: I fully understand. Doctors had to bear an excessive burden until now, but from now on, we can solve the issues by getting help from outside, such as affiliated hospitals, in addition to organizations and teams within the university, as well as by using DX and

ICT. The number of female faculty members is a nationwide issue, and Nagoya University has a low number of female faculty members compared to universities in other countries. Do you have any measures for this?

Maruyama: We are currently improving the system to increase the number of female faculty members not only at the hospital but throughout the university. For example, we have set up female quotas and are conscious of not being biased in the selection of faculty. However, because they move on to a new stage of life, female staff may find themselves in a difficult situation to continue research and medical practice. We are making efforts to support staff during the childrearing years, such as establishing a nursery school on the premises, but such measures are insufficient. So, I think that this is an issue that we need to consider as a hospital in the future.

Kimura: Prof. Maruyama's specialty is nephrology, and I've heard that there are many female doctors in your department. Do you have any experience you can share with us?

Maruyama: There are many young female doctors, but their career advancement offers challenges. However, in my opinion, university hospitals are, although only slightly, easier for women to work at than general city hospitals. This is because general city hospitals have fewer doctors compared to university hospitals. Since the roles and structures differ depending on the hospital, it is necessary to implement such measures as, for example, having a hospital that functions as the center of the region play a major role in collaborating with nearby hospitals. Furthermore, if the central hospital in the region collaborates with our hospital, which is the core base hospital to promote role-sharing, and a reasonable work style can be achieved, then Meidai

Hospital and its affiliated hospitals will be able to maintain an environment where staff members, including women, can work comfortably. We have an example of a female doctor who continued working to suit her work-life balance after giving birth and is now the director of a general city hospital. Since we have young female doctors who aim to follow suit, I think it is important to steadily create examples and success stories that can serve as role models.

Kimura: I suppose that Nagoya University Hospital has many female staff members, not just female doctors. Do you have any measures you are implementing?

Maruyama: The reality is that it is difficult for female staff members, especially nurses, to continue working. However, we are currently advancing reform by working to reduce the turnover rate to 10%. In the Nursing Department of our hospital, we are in the midst of working to ensure that each nurse can work comfortably to suit their work-life balance. Any hospital can, by and large, make efforts to hire more nurses and stop them from leaving; fortunately, the situation at Meidai Hospital is improving compared to before.

Kimura: The School of Health Sciences has the highest proportion of female faculty members of the university, and in that respect, I think you are taking the lead. What is the current situation?

Ishikawa: Nursing is a profession in which the proportion of women has always been high; the female faculty in the nursing field of our department is over 70%, which is even higher than in other fields in the Department of Health Sciences. In addition, since the number of faculty members in the nursing field is the largest, female faculty members in nursing alone account for over 60% of the entire Department of Health Sciences. In other fields, the ratio of female faculty members is roughly one-third. The Department of





Nursing has a high proportion of female students at over 90% as well, while the Department of Medical Technology, where I work, is a department that as the second highest after nursing. Some students go on to graduate school to obtain doctorates and then pursue teaching. I hope to have more students like those and to see a higher proportion of female faculty members in fields other than nursing, too.

Kimura: The School of Health Sciences had a high proportion of female faculty members to begin with. Do you give any specific consideration to the working environment compared to other organizations?

Ishikawa: While I think it is relevant to the high proportion of female faculty members in the department, I suppose that they take sufficient maternity and childcare leaves when they are pregnant and give birth, and that they work to maintain an appropriate work-life balance while raising children. I don't think that it's hard to work because they are female faculty members.

In addition, in the Department of Health Sciences, male faculty members now also take childcare leave. I think this is also leading to an understanding of the working styles of women. I am a little concerned that the overall number of faculty members is decreasing because of the organizational reform and the introduction of a point system for the faculty. I believe that this is leading to an increase in the burden on faculty members regardless of gender. Currently, the reduction of points for faculty members is being suspended. So, during this time, I would like to proceed with consideration of the maintenance and streamlining of the education and research structure.

Initiatives and measures for internationalization

Kimura: Now, regarding the theme of internationalization that Nagoya University is currently working on, could you provide examples of past initiatives and future measures in the Department of Health Sciences?

Ishikawa: One of our main internationalization initiatives in the School of Health Sciences is an exchange program with Yonsei University, and we have already had mutual visits for over 10 years. During the COVID-19 pandemic, the exchange was held online, but we have resumed in-person visits, and this year we plan to go to Korea. Yonsei University has five specialization programs in the field of health sciences like we do, so

each of us has a counterpart. Therefore, at exchange meetings, graduate students from the same department of each university make research presentations with each other and hold discussions with faculty members. During such exchanges, something was pointed out by Yonsei University: we will continue our exchanges, but the exchanges have not borne fruit as yet. There are indeed some cases where joint articles have been published and joint presentations have been made at conferences, but we will go further, being even more conscious of achieving tangible results. We have had Yonsei University's proposals for that, including to promote joint research, and when writing to complete a paper in a short period of time, students have intensive discussions while staying at each other's graduate schools for a short time. The School of Health Sciences does not have the facilities for short-term stays, but there is a dormitory for foreign students called International Residence-Daiko on the same premises. I'm thinking about whether we could use that dormitory for short-term stays. If it is possible, we will be able to hold regular exchanges in addition to exchange meetings. Furthermore, I think that there is even the possibility of expanding exchanges to other Asian universities through Yonsei University.

Kimura: Meidai Hospital received the functional evaluation as the international accreditation. Could you tell us about internationalization?

Maruyama: We are accredited by the JCI, an international certification body. This has led to many patients coming to our hospital. In addition, we have a system for the clinical training of foreign medical practitioners that allows foreign nationals to receive training at Meidai Hospital. Moreover, in the pediatric department, for example, the active international joint research on CAR-T cells for blood diseases has already begun together with Chulalongkorn University in Thailand.

Meaning of existence and mission of Nagoya University School of Medicine

Kimura: Do you have anything else to add?

Maruyama: The hospital faces the same challenges as the School of Health Sciences. Our financial situation is becoming very difficult. In order to continue research, we need to improve the efficiency of medical treatment, receive the proper medical fees, improve our financial situation through medical care, and secure support from external sources of funding, such as companies and the government. On that occasion, the meaning of existence of the university itself, including the necessity of Nagoya University for the general public, will be questioned. Therefore, I think it will be very important as to how well we will be able to produce results, though we are in a difficult situation, especially for the next few years.

Kimura: Nagoya University is as a research university,



and the School of Medicine and the university hospital have the primary philosophy of the creation of new medicine and medical care. So, I think that the realization of this should be the top priority to be accomplished. I am relieved to hear Prof. Maruyama's thoughts, and I hope you will achieve it as you mentioned. Prof. Ishikawa, do you have something to add as the School of Health Sciences?

Ishikawa: I appreciate the School of Medicine and the university hospital for their great cooperation in teaching classes and tutoring students in clinical practices at the hospital, and additionally for their support in research. However, we would like to think of ways not only to be supported but also how we can contribute to the School of Medicine and the university hospital. The School of Health Sciences has many highly capable and earnest students and is full of the human resources who have the strong desire to try a variety of different subjects. So, I think there are aspects in which we can contribute in some way, including the supply of human resources. We should let others know what we are doing, what we can do, and what we would like to aim for as a system where we can collaborate with each other, not simple by keeping to ourselves in the School of Health Sciences but by participating in projects that C-REX, the School of Medicine, and the University Hospital are implementing.

Kimura: As the School of Medicine comprises the School of Medicine and the School of Health Sciences,

both Schools regard each other as important partners. Direct exchange was difficult because of the physical distance between the Daiko and Tsuruma districts, fortunately, ICT and distance education advanced during the COVID-19 pandemic, and I feel that it has become much easier to collaborate with each other. In particular, the fusion with informatics, which is incorporated by the School of Health Sciences, is set as the goal of the School of Medicine, too. So, I believe that we will be able to work together hand-in-hand. Finally, I believe that the three of us, the School of Science, School of Health Sciences, and University Hospital, make up a trinity for the Nagoya University School of Medicine. I would like to have a structure that will allow these three to integrate and collaborate. We now have a new hospital director and head of the School of Health Sciences with whom we have made a good start. I believe that is one of the good turning points for us. I would like to ask for your continued support.

*1 JCI (Joint Commission International)

A United States-based international organization that accredits healthcare organizations. It rigorously evaluates the quality and safety of medical care based on patient safety, infection control, and other elements and gives its certification to facilities that meet global standards. Our hospital was accredited by the JCI in 2019 as the first national university hospital, and our certification was renewed in March 2022 after a re-evaluation.



