



Special Interview

Shin-ichi Kikuchi

President and Chairman of the Board of Trustees, Fukushima Medical University

Tragedy to Triumph

On March 11, 2011, the three northeastern Japanese prefectures of Fukushima, Miyagi, and Iwate were struck by a massive earthquake and tsunami of unprecedented magnitude. In addition to this natural disaster, the nuclear power plant in Fukushima Prefecture suffered a series of explosions that caused radioactive contamination throughout the area. After the catastrophe, Fukushima Medical University (FMU) worked day and night to provide relief services to the injured and radiation casualties. At present, the university continues to support the recovery efforts of Fukushima residents. Following the calamity and nuclear accident, the publication “FUKUSHIMSA: Lives on the Line” has chronicled the actions of FMU. In a special interview, President and Chairman of the Board of Trustees Shin-ichi Kikuchi explains the philosophy of “Fukushima: Hope in the midst of adversity” and stresses the importance of maintaining an accurate record for future generations. Moreover, while voicing diverse, concrete policy ideas, the president makes an impassioned argument for calling on the “autonomous strength of Fukushima.” He believes this is crucial in winning the battle for protecting the health of Fukushima’s residents in the next 50–100 years. (Interviewer: Yumi Takada)

A Week of Perseverance and Team Work

—Where were you and what were you doing when the earthquake struck?

Kikuchi: At the time, I had just finished giving a presentation at the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Tokyo. Right after that, our struggle with the earthquake began. We had to safeguard our foreign guests and ensure that they made it home safely the next day. Then I rushed to Fukushima while sending in a medical team to the prefecture’s disaster response headquarters. At the same time, two personnel were dispatched from the ministry to relay information from FMU to the central government. Injured patients and disaster victims were brought in one after another to the university hospital, which became an information waypoint for communication with the prefectural and central governments.

—Were all response decisions made by you in the period after the disaster?

Kikuchi: FMU had only one disaster response manual for calamities. The nuclear accident far exceeded anything that we had planned and outstripped the capabilities of the facilities, which the central and prefectural governments had set up for nuclear incidents. Moreover, even the medical facilities were significantly damaged in the disaster. So eventually, all response decisions had to be made without consultation as we were pressed for time.

—It seems that you were confronted with one challenging decision after another.

Kikuchi: The hospital had not considered developing medical infrastructure that could withstand a natural disaster or stockpiling food and medical supplies. The food supply at the time was just enough to sustain the FMU faculty. Another problem was the lack of adequate support for those providing support.

—So the university hospital became more like a war zone after the disaster?

Kikuchi: Exactly. We were faced with the challenge of organizing the intake of a diverse mass of patients. However, in the midst of the chaos, we managed to categorize the incoming patients and make the necessary decisions, such as “this dialysis patient needs to go to Tokyo, which still has continuous water supply,” “this patient needs surgery immediately,” and “this patient can be treated at the evacuation shelter.” The most important aspect during this process was that, as a prefectural institution, FMU did not suffer from any information gap or time lag in communication with the emergency response headquarters, with whom we were able to work hand in hand. However, this would not have been the case if FMU were a national university. I believe the point that needs to be communicated to posterity is that this was possible because of the like-minded approach of the university and the prefecture. We were completely on the same page.

—This capacity and framework must be handed down, correct?

Kikuchi: Definitely. This is also the case for having double electrical and water supply lines. In our case, we did not have food or water supply for quite a while, and gasoline lines were shut off. Unlike the National Self-Defense Forces, we were not self-sufficient; just as we offered support to patients, we needed someone to provide us with aid. If the stoppage of the water supply had lasted for the second week, we probably would have had to pull out of the hospital. However, we were able to unite and sustain ourselves with the generous assistance from several directions.

The Prefecture’s Public Health Survey

—Frankly speaking, most households had negative opinions about the surveys handed out after the disaster. Everyone’s memory of the aftermath of the disaster was scattered and some complained that the survey questions were needlessly meticulous. Were these surveys really necessary?

Kikuchi: Certainly there has been criticism to the



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Graduated from Fukushima Medical University in 1971 and joined FMU Hospital's Orthopedic Surgery Department. Visiting physician at Toronto University's Wellesley Hospital in 1977. Vice president of the Japanese Red Cross Medical Center's Orthopedic Surgery Department in 1980. Director of Fukushima Prefecture's Tajima Hospital in 1986. Professor of orthopedic medicine at FMU in 1990. Vice president of FMU Hospital in 2002. President of the FMU Medical School in 2004. Vice chairman of the FMU board of trustees and president of FMU Hospital in 2006. President of the Japanese Society for Spine Surgery and Related Research in 2007.

effect of “Nowhere in the world has such a survey of 2,000,000 people been implemented” and “All outcomes are likely to be negative.” However, if we did not conduct such a survey, what would happen in the future?

—So do you believe that this survey can bring some peace of mind to the prefecture’s residents?

Kikuchi: The feedback will certainly benefit the respondents as well as the generations to come. It might be cumbersome, but personal interviews are more expensive and time-consuming. If they provide the requisite information, respondents will receive more accurate prescriptions and care during subsequent hospital visits. Without these forms, patients will lack medical history and be treated as new patients.

—So even if the response is “I cannot recall,” it still forms a record?

Kikuchi: Yes, but we want people to understand that submitting the survey forms does not mean that they are entitled to special or privileged care, discounted or waived medical fees, or life-long health care guarantee, such as that provided with the so-called atomic-bomb victims record book. On the other hand, neither are we trying to be rigid by saying “You have to hand these in for the sake of the future,” nor are we collecting the forms as data for epidemiological studies. Addressing the needs of all prefectural residents is difficult, but we want them to understand that this is solely for their own benefit. It is like a baseline survey that will assist with their future medical care. This provides us with a basis for future comparisons and a means for carrying out response efforts.

The Three Responsibilities of FMU

—Let me ask about the future. What is FMU going to pour its efforts into next?

Kikuchi: We have three tasks at hand. First is to assess the health of 2,000,000 Fukushima residents and implement a framework to track this data for the next 30–50 years. Second is to have a lifetime tracking system for thyroid conditions, particularly for patients under 18. Third is to research the effects of mental care and psychiatric issues (e.g., stress and anger).

—Please explain each task.

Kikuchi: With the passage of time, some of us will pass away and things will change. The number of people unaware of the earthquake will increase and surely some of them will ask, “Why are we continuing with this survey after all these years?” A system that is led by lay people will have limitations, but putting into place a system that will follow through with the assessment of residents’ long-term health is crucial. We will need a national consensus on funding to support such a system. In addition, we will need to tap the camaraderie and support of our fellow citizens.

—There are concerns that covering 100% of the prefecture’s population will be logistically difficult.

Kikuchi: We will work on it over our lifetime. However, if we encounter unavoidable obstacles, we will have to limit the survey to those living closest to the nuclear power plant and to those who have been exposed to a high dose of radiation.

—Are thyroid exams also very crucial?

Kikuchi: Absolutely. This is something we have to thoroughly look into. But there are two sticking points with the thyroid exams. First, there are a few thyroid specialists in each prefecture. Pediatric thyroid examinations cannot be done by just any doctor; thus, there is an urgent need to train more specialists. Second, the precision of the examinations is an issue. The more highly trained the specialist is, the more reliable the examination results are. Consequently, we urgently need specialists who can be relied upon to

conduct the most precise and thorough examinations.

—Is mental health care also crucial?

Kikuchi: This is a truly complicated issue. Happiness comes from being able to have hope for the future and cherish the past. But disaster victims have lost both in a way: they block their past and are unable to see a positive future, thus creating endless anxiety. It is tragic to hear people living in evacuation shelters say, “I am filled with so much anger that I just cannot budge an inch.” Current science tells us that if people do not get up and move around, they build up stress that can contribute to dementia, cancer, and shorter life spans.

Securing Safety and Peace of Mind

—I hear that thyroid specialists are pouring in from across the country to provide support.

Kikuchi: Yes, given the current dire situation, we certainly need the support that is flowing in. Moreover, we have an overwhelming 360,000 children to examine and are severely lacking human resources. This is obvious to anyone who visits the area. We have to provide medical care on many fronts. The thyroid team is not the only team of doctors; we also have the mental health team and the Fukushima health management survey team, among others.

—In the past year and a half (since the earthquake), hasn’t the actual child population in Fukushima Prefecture plummeted?

Kikuchi: Yes, parents have taken their kids outside the prefecture to “safe places.” But this is problematic from more than just the health care perspective. There is a difference between being “safe” and “anxiety-free.” Safety is a matter of scientific data; being free from anxiety is a matter of finance and sentiment. If the prefectural and central governments are called upon to cover the costs of securing peace of mind, the

entitlements will be endless. I do not believe this is a foolproof solution. The first step in a real plan for resolution is to make progress with straightforward studies of the food supply and internal radiation exposure, so that parents can eventually feel “it is safe to go back to Fukushima.” And we need real leadership that will ensure that this progress is made.

Victims Ought Not Criticize Fellow Victims

—The nuclear accident is an unfortunate event that must simply be accepted and dealt with, correct?

Kikuchi: Yes, that is correct. Since the earthquake, the word *kizuna* (bonds of friendship) has become widespread. But I have noticed incidents in which disaster victims criticize other victims; this is appalling. There have been individuals who have sounded warnings about the dangers of nuclear power plants even before the accident, and there are academic papers on the subject. But these opinions have been in the minority and we did not bother to heed the warnings. We, the citizens of Japan, and the government, are the ones who have allowed nuclear power plants to be set up. First, we have to face up to this fact and turn to the experts across the globe to discover ways to deal with the problem.

—After the earthquake, the media featured a fair number of people referred to as “atomic energy specialists.”

Kikuchi: An atomic energy specialist or expert is someone who has spent his or her academic or professional career studying atomic energy issues. Here in Japan, we don’t have that many people with this designation, which is why it is important to consult experts across the globe. We have to become wiser here at home and educate ourselves and the generations to come. We made nuclear power a pillar of our national energy policy, but failed to fulfill our “risk communication” responsibility toward the populace.

Meaning of Risk Communication

—What exactly is risk communication?

Kikuchi: In the English-speaking world, there are experienced scientists called “science writers” or “risk communicators,” who are responsible for conveying information on scientific issues to the general population in layman terms. For example, I have given about 50 lectures a year, and the style of lectures widely varies for experts and the general audience. To ensure that the content is comprehensible to the latter, I have to adjust my way of speaking. It is unfortunate that such kind of risk communicators is almost nonexistent in Japan. One of the few experts we do have is Mr. Shunichi Yamashita, who I invited to speak on campus in my capacity as the university vice president. He has been to Chernobyl and is the foremost medical expert with a wealth of experience in atomic energy. Going forward, I believe FMU needs to train competent risk communicators and convey to a wide audience, in particular the youth, the multifarious issues related to nuclear power. More importantly, we have to do it in such a way that the issues are easily understood.

A Higher Level of Awareness of People Overseas about Risks of Nuclear Power

—Do people overseas have a high level of awareness about risks?

Kikuchi: Yes, they do. This is why we have created a new division at FMU, the Department of International Cooperation. Overseas observers are taking a very level-headed approach to learning from the incident in Japan. Initiatives have been taken to build nuclear power plants in Southeast Asia and the Middle East. This might not be the most elegant way of saying it, but they realize that they need nuclear power and that accidents are inevitable. Therefore, they are also earnestly studying disaster response measures to such

accidents.

Our Mission to Leave a Record

—So they see Japan as the most valuable lesson to heed?

Kikuchi: Yes. Sadly, we are undergoing major hardship because of the nuclear power plant accident. Scientifically speaking, there is no part of Japan that has not been contaminated by radiation at the moment. Thus, the need of the hour is rational discussion and a mindset focused on the needs of future generations. We have to accept the fact of the accident and honestly, steadfastly convey the truth to posterity. This is the historic duty we are faced with.

—Why are you so keen on leaving a record?

Kikuchi: Administrations and health care institutions are frequently asked to answer questions and stick to that role. That is, we cannot offer any counter arguments and this is the accepted culture. However, this implies that we cannot fully address or communicate various issues. “Record the facts, as is, plain and simple.” “Criticism alone will not bring progress.” “The record we leave must be comprehensible to third parties.” These are the words I reiterate. Also, I believe the university must shore up its PR department.

Only Prefectural Residents can Save Each Other

—As we speak, you’ve made me realize something. The impression that “we are disaster victims” is very strong. Do you think the focus has been overly inward?

Kikuchi: Well, every medical professional has had his or her view of life and death put to the test. Although life has been taken from Fukushima, for many it also

remains. I decided to stay behind, but if the health care system crumbles, no one will stay. I would like to reiterate that we have a historic duty. We have to communicate “Fukushima” to those outside Japan and to future generations.



Yumi Takada

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—So we have to rethink on what we can do as Fukushima residents, right?

Kikuchi: Yes, all Fukushima residents must share this sentiment. The central government cannot funnel all its program and budgetary resources to Fukushima Prefecture. If the prefecture receives a string of subsidies from the central government, the country will not be able sustain itself.

—Specifically, what should residents do?

Kikuchi: First, we have to be smart. It is important for each of us to take personal responsibility for our safety. The U.S., for example, is steeped in an ethos of taking personal responsibility for protecting themselves, due to lessons learned from history. I think the Japanese people, more often than not, are caught off guard. With health care, for example, Japan is the only country where the entire burden is put on the shoulders of physicians—no matter what happens, when, where, or to whom, doctors are expected to take

care of it.

—So you are saying that we should do everything we can with the available resources?

Kikuchi: Yes. Also, we need to immediately address the urgency of training more people. We have to educate the youth of Fukushima and train them to become nuclear power engineers. An increasing number of people are moving out of the prefecture, and we cannot expect elite human capital to flow back in. We may have the technical knowledge to decommission the undamaged nuclear power plants, but we do not have the knowledge to decommission those ruined by the hydrogen explosions. We have to educate the younger generation within the prefecture and provide them with the expertise to shut down such reactors. We can restructure existing educational institutions within Fukushima to train nuclear power professionals. To me, this is the type of thinking that we need.



—The new center established by FMU as a base for recovery efforts also include a human resource development division, right?

Kikuchi: Yes, that is right. The center has five built-in features. One of them is an educational program for the long-term development of personnel for disaster medicine instruction and research. This program includes lecture courses on thyroid endocrinology and mental health care for disaster victims, among others. In addition, to create jobs we are considering invigorating health care-related industries. This type of job creation will contribute to maintaining the population of Fukushima and building up the work force.

Challenges of the Aging Population Exposed to the Disaster

—This discussion has really changed my understanding of the FMU faculty and deepened my

awareness of the present and future.

Kikuchi: Fukushima Prefecture must develop a vision for handling the aging society as well. In the existing social system, patients receive medical care only if they have access to it. Henceforth, administrative and elder-care services will approach patients proactively, without waiting for patients to approach them. Such will be the trend in the future. This natural disaster has exposed the vulnerabilities of our social structure. The directionality has to shift. A considerable number of disaster victims have lost their very livelihoods. Therefore, as in the case of the aging population, social services have to reach out to disaster victims as well, and not vice versa. This is the “Fukushima model.” Five to ten years hence, we intend for it to be implemented throughout the country, despite being an experiment. This is a challenging, historic task for us. More than ever, the world is looking at Fukushima. We have to move forward believing that we can triumph over the earthquake and tsunami, no matter what hurdles stand in our way.

End of Interview

Yumi Takada

I got the feeling that Fukushima has a strong future to look forward to. Chairman Kikuchi and the FMU medical team have collaborated to march forward and serve as rallying figures. The delays in the health surveys have been an issue, but the nuclear accident was beyond the country’s expectations. The medical and health care systems were insufficient both in terms of manpower and facilities. But all my doubts have been erased. The medical examinations currently conducted for children are receiving maximum commitment. Despite being small in number, the FMU faculty is working at full capacity, day and night, to painstakingly conduct thorough examinations.

And that is not all. The university is currently on a mission to send out to the world a new “Fukushima model” that is on the forefront of radiation and medical expertise. These ongoing efforts make me proud to be a citizen of Fukushima and fill me with the desire to stand tall and, in the words of Dr. Kikuchi, turn Fukushima’s tragedy into triumph.

Overview of Support Activities by Hiroshima University

Planning and Financial Affairs Division

1. Relationship with Fukushima Medical University

- (1) Establishment of a partnership agreement with the University (development of clinical research education programs, victim treatment, establishment of a research base for study of radiation effects, etc.) (4/2/2011)
- (2) Expert Dispatch
 - Appointment of Prof. Kenji Kamiya as Special Instructor at the University (4/1/2011)
 - Appointment of Prof. Kenji Kamiya as Vice President of the University (7/15/2011)
 - Appointment of Prof. Akira Sakai, Lecturing Professor of Hematology, Hiroshima University, as an expert lecturer in victim treatment in the University's Radiation and Biological Sciences Course, newly organized in November 2011.
 - Dispatch of radiation experts to provide support for the University's internal radiation screening activities (performed by each of the following members of the University's Radiation Emergency Medical Assistance Team (REMAT).
- (3) Educational Seminars for Students and Faculty
 - The University held a Radiation Emergency Medical Assistance Seminar for doctors and nurses.
 - Coinciding with the general meeting of the medical and nursing support group at the University (6/24/2011), the University held an educational lecture given by Prof. Kenji Kamiya, "An Overview of the Effects of Radiation on Your Health," for the parents and guardians of students of both departments.

2. Activities throughout Fukushima Prefecture

- (1) Radiation Emergency Medical Assistance Measures
 - Dispatch of REMAT
REMAT has been on dispatch since 3/12/2011 (The team comprises doctors, radiation examiners, nurses, and group administrators).
Major Activities
 - (1) Airlifting of patients by helicopter, medical examinations, and decontamination measures at the offsite medical center and during early-stage screenings.
 - (2) Performed thyroid screenings for adults and children (*Apart from the activities performed by REMAT, a core team of expert instructors independent of Hiroshima University was also dispatched between March and April 2011.)
 - (3) Organized and provided instructions for performing contamination screenings.
 - (4) Dispatched additional doctors to the emergency medical team stationed within the "Emergency Medical Infirmary" established at the Fukushima Daiichi nuclear plant from 7/1/2011 (nurses were also dispatched in November 2011).
 - Contributed fresh water, foodstuffs, and supplies to support the Radiation Emergency Medical Assistance activities.
- (2) Spread awareness of radiation among residents.
 - Appointed Prof. Kenji Kamiya as prefectural radiation health risk management advisor (4/1/2011). Since his appointment, he has held numerous instructional seminars for regional educators.
 - Reported the results of the prefecture-wide examination of the effects of radiation on children by Hiroshima University professor Satoshi Tashiro at the "Conference on Radiation and Child Growth and Development" (held on 7/1/2011 in Iwaki) organized by the Japan Pediatric Society and the Japanese Society of Emergency Pediatrics.
- (3) Medical Support Activities
 - Doctors, nurses, and administrators from the Hiroshima University medical team helped perform medical examinations for people staying in disaster shelters in Sukagawa city, Fukushima Prefecture (4/23/2011–4/30/2011).
- (4) Other Activities
 - Establishment of a partnership agreement with Fukushima University (development of education and research programs, restoration of contaminated areas, research collaboration and support for radiation medical treatment, promotion of increased literacy and awareness regarding radiation treatment, etc.) (7/28/2011).
 - A team of five experts led by Dr. Nanao Kamada, former director of the institute of A-bomb radiation medicine at Hiroshima University, and Dr. Osamu Saito, a doctor at Watari Hospital, examined urine samples of 15 people from the Iitate and Kawamata areas in Fukushima Prefecture and detected radioactive cesium particles in all the samples. The team explained that the amount of radiation released over the next 50-year period would be as minimal as 0.1 millisieverts, and this level of radiation would pose no threats to health with no future consumption of contaminated vegetables, etc. (June 2011).
 - The city of Nihonmatsu released the results of the WBC examination conducted on 20 residents in the last week of June 2011 (the analysis of the examination was conducted by Prof. Masaharu Hoshi of the institute of A-bomb radiation medicine at Hiroshima University). While small quantities of both cesium 134 and 137 were detected in all the examinees, the levels were small enough to have only minimal impact on their health. No iodine was detected (July 2011).