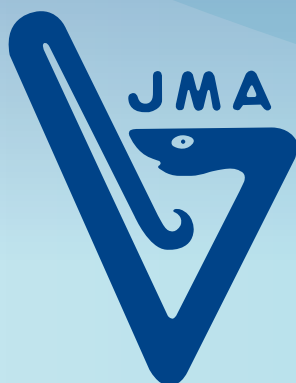


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Japan Medical Association Journal



JMA Policies

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—Experience and physicians and veterinarians collaboration to recover—

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International Medical Community

Japan Medical Association Junior Doctors Network Report on the WMA General Assembly, Moscow, 2015

Essay

Shoguns and Animals

From the Editor's Desk

JMAJ

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Managing Editor: Yuji NOTO

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Hisashi TSURUOKA Mieko HAMAMOTO

Associate Editors:

Rei KOBAYASHI

PUBLISHER

Japan Medical Association

2-28-16 Honkomagome, Bunkyo-ku, Tokyo 113-8621, Japan

Tel: +81-3-3946-2121 Fax: +81-3-3946-6295

E-mail: jmaintl@po.med.or.jp

www.med.or.jp/english/

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With Regard to Reaching Broad Agreement on the TPP Agreement Negotiations*¹

JMAJ 59(1): 1-2, 2016

Japan Medical Association

On October 5, 2015, the ministerial meeting for Trans-Pacific Partnership (TPP) negotiations, which had been in session in Atlanta, USA, reached a broad agreement. Consequently, the TPP Headquarters at Japan's Cabinet Secretariat released the Overview of the TPP Agreement.

For years, the Japan Medical Association (JMA) has strongly urged the government and the ruling party to firmly secure the future of the universal health insurance system of Japan. On February 20, 2013, immediately before Prime Minister Shinzo Abe left the country to attend the Japan-US summit meeting, the JMA made a proposal to government officials including Prime Minister Abe titled, "To Protect the People of Japan from TPP."¹ On February 27, after the summit meeting, the JMA released "Our Opinions on the Government's Determination to Join the TPP Negotiations"² and held a regular press conference to urge the government to prevent the TPP negotiations from influencing the universal health insurance system.

In response, Prime Minister Abe stated in the Diet that the public healthcare system was not subject to the TPP negotiations, and that the negotiations would never affect the universal health insurance system of Japan. Additionally, the Liberal Democratic Party's Resolution on Participating in the TPP Negotiations by the Diplomatic and Economic Partnership Council stipulates that the universal health insurance system and public pricing system for prescription drugs are "national interests that must be protected."

Along with these firm efforts by the JMA, statements that ensure the protection of the Japanese universal health insurance system were



Dr. Yokokura making a statement at the World Medical Association General Assembly

included in the Overview of the TPP Agreement. In Chapter 10 Cross-Border Trade in Services, the Overview specifically states that Japan has secured comprehensive reservations on social services such as healthcare, social security, and public insurance programs, and that social security will be exempt from the ratchet clause. In addition, in Chapter 11 Financial Services, it states that the TPP will not apply to activities and services that are part of legal systems relating to public pension plans or social security (including public healthcare programs) or that are carried out by the signatory nation's own budgets, guarantees, or financial resources. Through tenacious efforts of the TPP negotiating team, the JMA's demand to protect the universal health insurance system of Japan was incorporated in these 2 points.

However, the potential effects of some factors on the Japanese healthcare system remains unclear, such as the introduction of strong enforcement systems for the protection of the intellectual property of medicines mentioned in Chapter 18 Intellectual Property.

The following 3 points must be fulfilled in

*¹ This article is based on the statement made by Dr. Yoshitake Yokokura, President of the Japan Medical Association at the General Assembly of the World Medical Association in Moscow, Russia on October 17, 2015.

order to protect the world-renowned universal health insurance system of Japan: (1) the range of public healthcare benefits must be maintained, (2) combining covered and uncovered insurance care must never be allowed, and (3) commercial entities (i.e., corporations) must never be allowed to take part in the management of health-care institutions.

The details will be negotiated henceforth, and then each nation is expected to start the ratification procedures domestically. As the members of the Diet debate the issue, the JMA strongly urges the ruling party and the government to preserve our world-renowned universal

health insurance system. Social security and the economy interact with each other. The JMA shall continue the close and strict observation of the developments under the TPP.

References

1. Japan Medical Association. A Proposal to Protect the People of Japan from TPP. 2013. http://dl.med.or.jp/dl-med/teireikaiken/20130227_14.pdf. (in Japanese)
2. Japan Medical Association. Our Opinions on the Government's Determination to Join the TPP Negotiations. 2013. http://dl.med.or.jp/dl-med/teireikaiken/20130227_11.pdf. (in Japanese)

Japan Earthquake 2011 and Fukushima Nuclear Accident

—Experience and physicians and veterinarians collaboration to recover—^{*1}

JMAJ 59(1): 3-9, 2016

Yoshitake YOKOKURA¹

Great East Japan Earthquake and JMA's Responses

On March 11, 2011, earthquakes with the maximum magnitude 9 struck Japan. This Great East Japan Earthquake induced a massive tsunami and subsequent explosions at the Fukushima Daiichi Nuclear Power Plant, causing extensive damage. Many residents were forced to evacuate (**Fig. 1**).

The top priority in disaster is the protection of human lives and the health problems of disaster victims. The lives and health of the victims must be protected at each stage in disaster response, from immediately after a disaster strikes until it is fully contained.

To support medical care directly, Japan Medical Association (JMA) dispatched emergency medical teams called JMAT and cooperated on postmortem examinations. JMAT, which stands for Japan Medical Association Team, is a disaster medicine program of the JMA. Indirect support includes public health and infection control management at shelters, and transport of drugs to the affected areas. For example, to support the reconstruction of community medicine, we requested public financial aid and collected and allocated donations.

In addition to the JMAT, JMAT II was also sent to provide more extended health management and to supplement medical care in the

affected areas suffering from physician shortages. When adding both JMAT and JMAT II together, about 2,600 teams consisting of 11,000 members were dispatched.

The mission of JMAT was to provide medical care in disaster areas, by offering medical support at first-aid stations, clinics, and hospitals in the affected areas. Each JMAT typically consists of one physician, two nurses, and one administrative staff, and was deployed for three days to one week.

Figure 2 shows the division of roles between DMAT and JMAT. DMAT, which stands for the Disaster Medical Assistance Team, is a medical team specially trained in acute disaster medicine with mobility. DMATs are dispatched by governments and responsible for healthcare in the hyper-acute phase of a disaster, that is the initial 48 hours. JMAT takes over after DMAT withdraws, to support medical care of the affected areas over extended period until community medicine is restored. JMA functions as a coordinator between prefectural medical associations that dispatch or receive JMAT.

Figures 3 and 4 show the status of JMAT dispatches. The dispatch started immediately after the earthquake, and reached a peak from April to early May. On April 10 alone, a hundred teams were dispatched.

As a response to the nuclear accident, we created and distributed a map with actual radio-

^{*1} This article is based on the presentation made at the WVA/WMA Global Conference on One Health, held in Madrid, Spain, on May 21-22, 2015.

¹ President, Japan Medical Association, Tokyo, Japan (jmaintl@po.med.or.jp).

Great East Japan Earthquake

- Date and Time: 14:46 JST or 5:46 GMT. Fri., **March 11, 2011**
- Epicenter: Off the Sanriku coast in the Tohoku area
- **Magnitude: 9.0**, Maximum Seismic Intensity: 7, in Kurihara City, Miyagi
- Type of Earthquake: Underwater earthquake
- Human Toll: 15,690 dead, 4,735 missing, 5,714 injured (as of Aug 11, 2011)
- Features:
 - Giant **Tsunami** hit an area stretching 500 km (310 mile) on the Pacific coast.
 - Serious accident occurred in reactors 1 to 4 at **Fukushima Daiichi Nuclear Power Plant**.
 - Afflicted areas experienced shortages in the supply of basic goods and food.



Japan Medical Association

Fig. 1

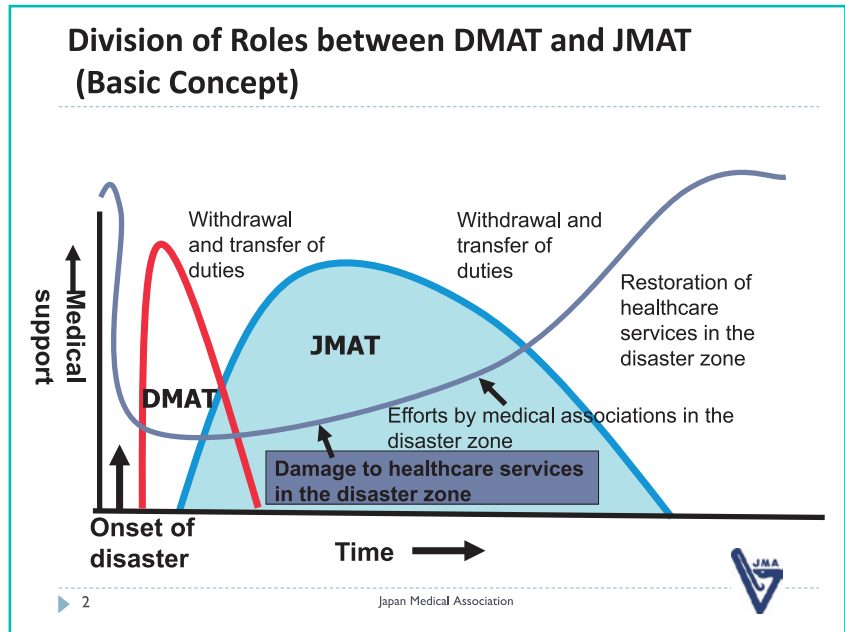


Fig. 2

activity readings in Fukushima every day. The map was referred to when dispatching JMATS to Fukushima. On April 19, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), tentatively set the level of 20 milli-sievert per year as a radiation safety standard for

infants and children to be used for school grounds and buildings in Fukushima. They increased the standard from the original limit of 1 milli-sievert of exposure to 20 milli-sievert. So, the JMA immediately submitted a petition to the MEXT, asking for actions to minimize radia-

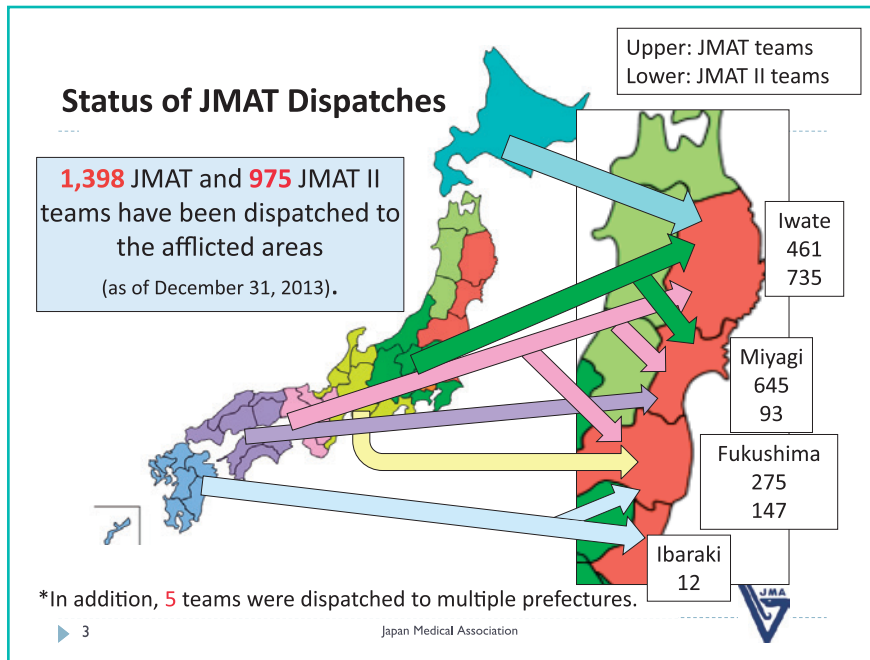


Fig. 3

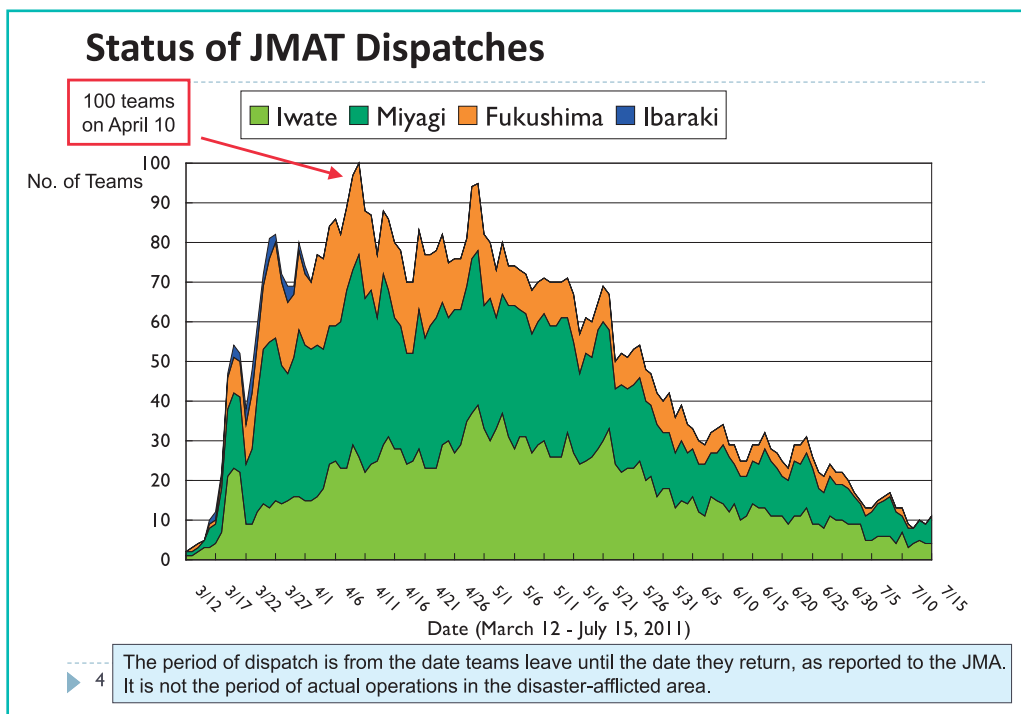


Fig. 4

tion exposure. After that, the MEXT withdrew the new recommendation.

Disaster medicine requires “crisis management” rather than “risk management.” Physicians who join JMAT are trained in wide-range of medical fields and serve local people as *kakaritsuke*^{*2} physicians every day. That is why JMAT was able to meet the local people’s health needs in the affected areas. JMAT activities are comprehensive medical activities. Its foundation lies in the origin of medicine that transcends fragmented domains of modern medicine. As long as this origin is shared, and when times and places are properly coordinated at disaster sites for community medicine, those involved would realize that all of their expertise and activity styles that vary among team members were actually needed.

In the aftermath of the March 11 earthquake, the JMA took a central role in establishing the Disaster Victims Health Support Liaison Council

consisting of major organizations involved in healthcare and long-term care (Fig. 5). The JMA President served as Chairman of the Council, and the JMA acted as Secretariat for the Council. This Council’s mission was to gather and organize information obtained from governments and healthcare organizations.

When the disaster struck northern Japan in 2011, normal Internet connection failed to function sufficiently. For that reason, JMA started investigating the use of high-speed Internet satellite “Kizuna” developed by the Japan Aerospace Exploration Agency (JAXA). On January 30, 2013, the JMA and JAXA concluded an agreement on the experimental application of Kizuna in disaster medical activities. The purpose of the agreement is to investigate how to use Kizuna in disaster countermeasures when a large-scale disaster has occurred, and to jointly conduct experiments relating to the application of the satellite in disaster medical support activi-

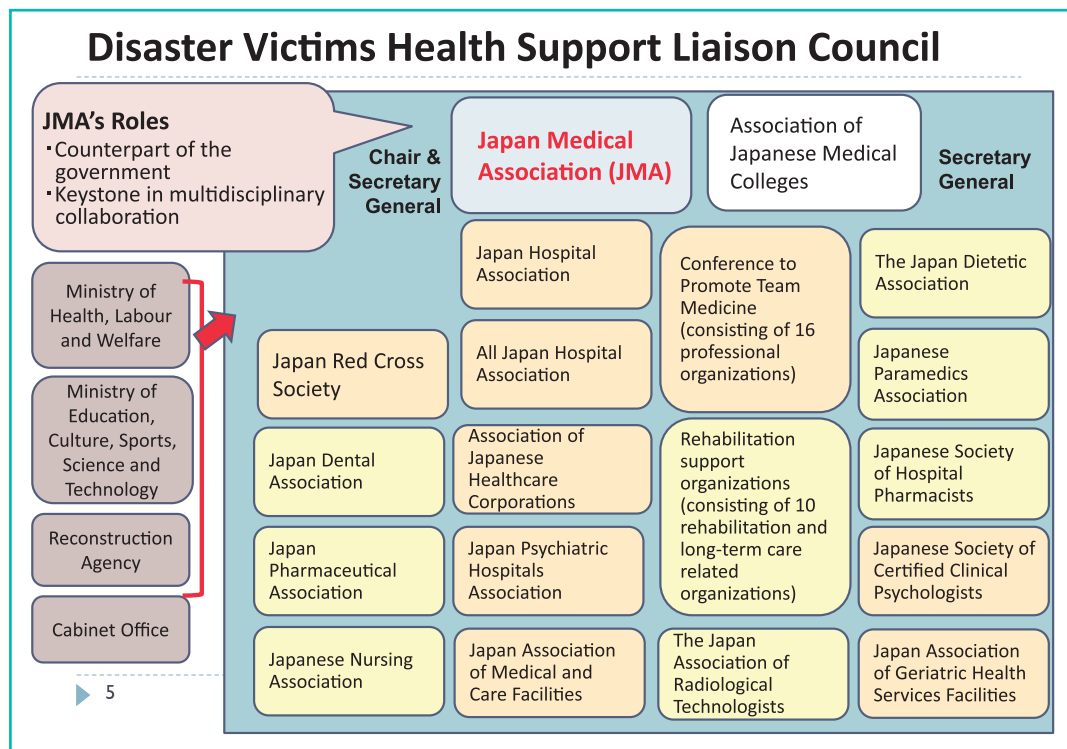


Fig. 5

*2 *Kakaritsuke* physician is a physician who people can consult on any issues, is well versed in the up-to-date medical information, can refer a patient to a specialist or specialized medical institution when needed, and is a trustworthy and familiar figure with comprehensive capabilities entrusted with community medicine, health, and welfare.

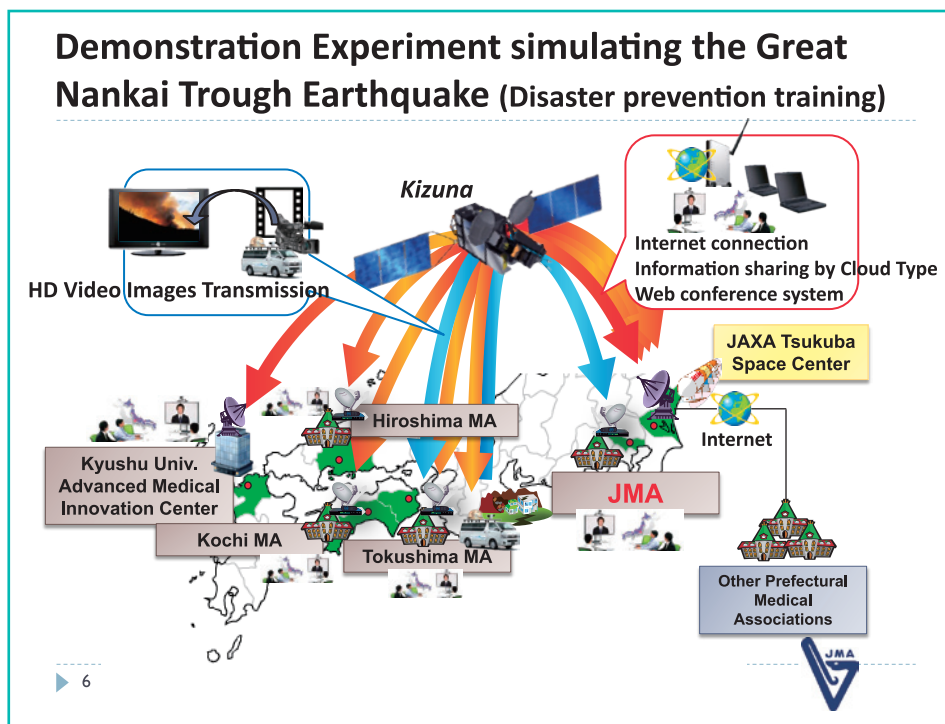


Fig. 6

ties on December 10, 2014.

In 2013 and 2014, experiments simulating the anticipated Great Nankai Trough Earthquake were conducted as an emergency drill, with the cooperation of the JAXA and National Institute of Information and Communications Technology (NICT) (Fig. 6). The Great Nankai Trough Earthquake is anticipated to cause extensive damage to extremely wide areas. In this training, we communicated with the affected areas through a Web-conference system using a satellite Internet channel, to share damage status and medical data over the cloud, and to request JMAT dispatch to prefectural medical associations. We will conduct a series of similar trainings from now on.

Providing Seamless Care in the Community-based Comprehensive Care System

As Japan approaches a super-aged society, in order to establish disaster-resistant healthcare

provision system, the system must incorporate community-based comprehensive care that places geriatric care as the main focus in daily practice. JMA strives to enrich and strengthen the *kakaritsuke* physician's function to realize sustainable medicine that the people of Japan can safely rely on.

Figure 7 shows the framework of “seamless medical and long-term care,” in which *kakaritsuke* physicians play the central role. Figure 8 shows the framework of the Community-based Comprehensive Care System. The needs of an elderly person will shift along with the red diagonal line. Anticipating possible needs at each stage will help secure medical and long-term care resources comprehensively.

For this reason, JMA requested the national government to bear the financial burden, which led to the General Security Fund for Community Medicine and Long-term Care with 90.4 billion yen*³ (USD 752 million) for medicine and 72.4 billion yen (USD 602 million) for long-term care. Using this fund, we will do our best in support-

*³ 1 USD = 120 yen (as of May 12, 2015)

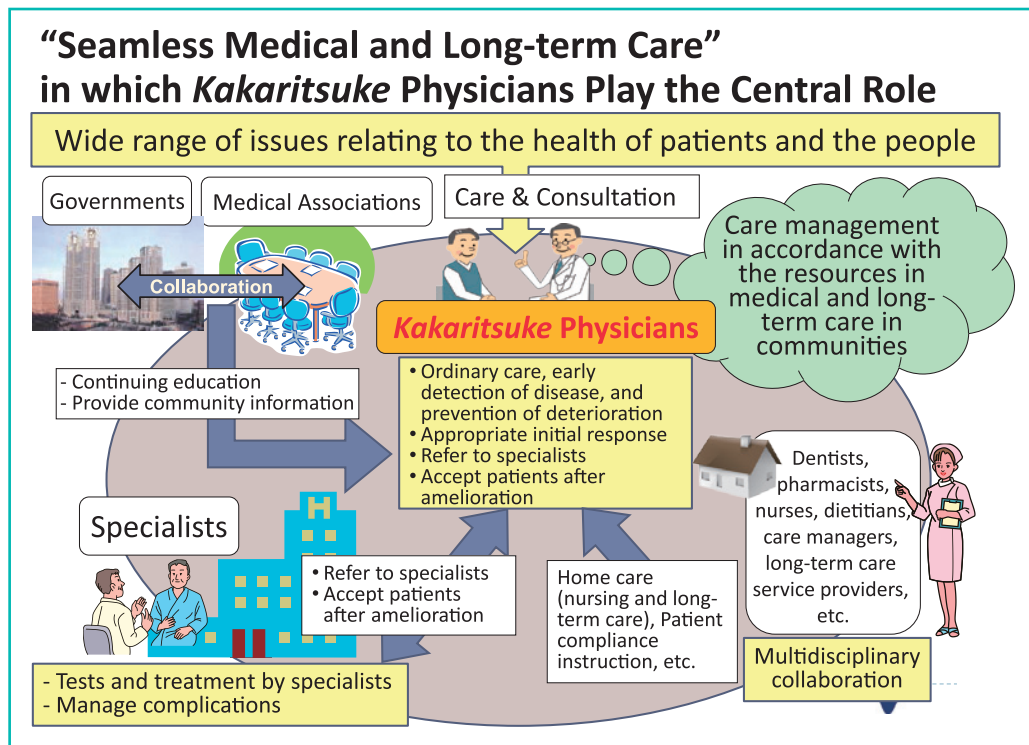


Fig. 7

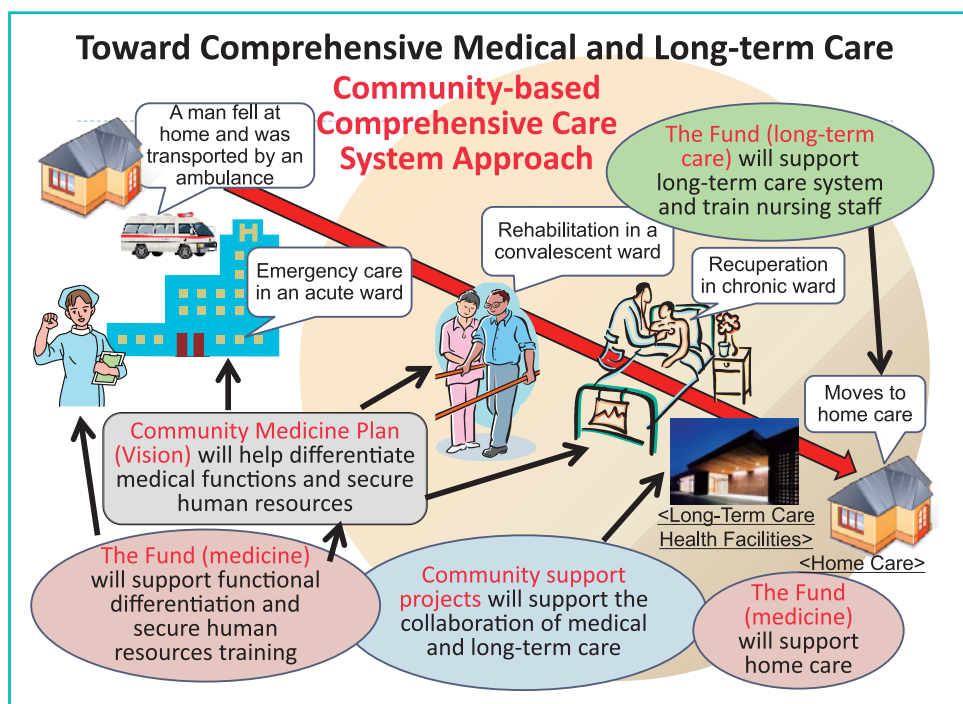


Fig. 8

ing any efforts by local medical associations that aim to realize effective and high-quality medical and long-term care.

Collaboration with Veterinarians

Following the conclusion of a memorandum of understanding between the World Medical Association and the World Veterinary Association, to build a cooperative relationship pertaining to zoonotic diseases, food safety and others in October 2012, the JMA and the Japan Veterinary Medical Association (JVMA) concluded an agreement promoting academic cooperation in November 2013. At the prefectural level, veterinary associations and medical associations are also in the process of signing agreements, to strengthen the collaboration and partnership between veterinarians and physicians to establish a safe and secure society.

As the first step for promoting collaboration between the JMA and the JVMA, a symposium entitled “Zoonotic infection—Current status and management of rabies” was held in October, 2014. The JMA has been working to promote zoonotic infection control to raise awareness among people. One of our efforts is the publication of the zoonotic disease handbook. In addition, our Continuing Medical Education Program offers various seminars across the nation, of

which many concern infectious diseases.

Until now, physicians and veterinarians have been making efforts from their respective positions. When physicians and veterinarians share the concept of “One Health” and combine our intelligence, infection control planning will progress even more. It will also lead to further advancement of human medicine and veterinary medicine.

Better “disaster preparedness” lies in further participation in the national disaster management planning, collaboration with relevant agencies and organizations, and establishment of information sharing methods. These efforts are essential to effectively respond at the maximum ability in the event of a large-scale disaster. That is all the more reason that we believe it is essential to realize the need for physician-veterinarian collaboration and the importance of how we should approach it.

In order for the evacuation zones that resulted from the Fukushima nuclear accident to recover, the communities require health support for local residents as well as the reconstruction of environment in which healthy biodiversity can be sustained. Environmental monitoring for local residents and securing food safety are also vital. For these efforts to succeed, it is important for medical associations and veterinary medical associations to reinforce our collaboration.

The Japan Medical Association Has Signed the *i*JMAT Agreements in Taiwan—Promoting International Cooperation in Medical Aid Activities in Times of Disaster^{*1}

JMAJ (59)1: 10-11, 2016

Japan Medical Association

Dr. Yoshitake Yokokura, President of the Japan Medical Association (JMA) and Dr. Masami Ishii, at that time Executive Board Member of the JMA visited Taiwan on July 30, 2015, to attend the signing ceremony at the Ministry of Foreign Affairs and finalized agreements concerning mutual consent on dispatching physicians and assistance systems for medical relief in disaster situations with both the Taiwan Medical Association (TMA)^{*2} and the Taiwan Root Medical Peace Corps (TRMPC,^{*3} a Taiwanese non-governmental organization providing international medical assistance), respectively.

In the opening remarks, Dr. Yokokura expressed his gratitude for the numerous donations from Taiwan for the victims of the Great East Japan Earthquake in 2011, and explained that the JMA was asking its members across Japan for donations for the many burn victims of the accidental dust explosion at a water park in New Taipei City, Taiwan, on June 27, 2015.

At the ceremony, which had numerous attendees including representatives from the Ministry of Health and Welfare, Ministry of Foreign Affairs and East Asia Relations Commission (a liaison agency for Taiwan-Japan affairs in Taiwan) as well as members of the Legislative Yuan, Dr. Yokokura, Dr. Ching-Chuan Su, President of the TMA, and Dr. Chi-Chun Liu, President of the TRMPC each signed the relevant agreements. The ceremony was covered by several major media outlets from both Japan and Taiwan, including the Japan Broadcasting Cor-



Dr. Yokokura (JMA) and Dr. Su (TMA)



Dr. Yokokura (JMA) and Dr. Liu (TRMPC)

poration (NHK).

The agreements aim to promote international cooperation regarding medical aid activities in times of disaster at the civilian level based on the concept of *i*JMAT.^{*4} It will guarantee Japanese and Taiwanese physicians' license in

^{*1} This is an English-translated version of an article printed in the JMA News No. 1296 (September 5, 2015 Issue).

^{*2} Taiwan Medical Association. http://www.tma.tw/EN_tma/president.asp.

^{*3} Taiwan Root Medical Peace Corps. <http://www.taiwanroot.org/about.php?l=en&id=5>.

^{*4} *i*JMAT: international Japan Medical Association Team.

both nations and enable these physicians to lawfully participate in medical activities with physicians from disaster-stricken countries and under the supervision of leading local physicians, so they can strive to save disaster victims.

In Japan, foreign physician must pass the National Medical Practitioners Qualifying Examination and become licensed to practice medicine in accordance with Articles 2 and 7 of the Medical Practitioner's Act. In the aftermath of the Great East Japan Earthquake, the Ministry of Health, Labour and Welfare of Japan indicated that providing a minimal level of medical practice for disaster victims in times of unanticipated emergency situations can be regarded as an act of legitimate professional duty under the penal code and therefore the illegality involved in such act should be considered annulled; however, only 4 nations—Israel, Jordan, Thailand, and the Philippines—were approved even though over 30 nations, including Taiwan, offered help.

After the signing ceremony, Dr. Ishii emphasized the significance of signing the agreements to the press, stating “The conclusion of the agreements today will enable medical assistance between our 2 nations in events of disaster.” He also shared his view that “Disaster relief will change to the ‘demand-based type,’ in which

additional assistance will be considered upon receiving requests from local parties involved, from the previous ‘push-type’ that can put a burden on the receiving nation.”

As Dr. Yokokura mentioned at the ceremony, the JMA offered medical assistance to the burn victims of the dust explosion, prior to the conclusion of the agreements. On July 2, Dr. Shigeru Suganami, President of the AMDA (The Association of Medical Doctors of Asia, a certified non-profit organization) and Dr. Yoshito Ujiie, Chair of the Japanese Society of Intensive Care Medicine (JSICM) visited Taiwan as an advance delegation party, and reported that “There are many patients in highly severe conditions” and that “They require the expert assistance from Japan in order to utilize the artificial skins and medical supplies donated from Japan.” After receiving requests for assistance from the TMA and the TRMPC, the JMA dispatched 6 burn experts recommended by the 3 relevant medical societies (JSICM, the Japan Association for Acute Medicine, and the Japanese Society for Burn Injuries) as the “Joint Burn Care Assistance Team of Physicians by JMA and Three Medical Societies,” and provided medical support in Taiwan from July 12 to 15, 2015.

The International Activities in Taiwan by the Joint Burn Care Assistance Team of Physicians from Japan Medical Association and Three Medical Societies

JMAJ 59(1): 12-16, 2016

Naoyuki MATSUDA,¹ Sachiko YAMADA,² Takuga HINOSHITA,³ Junichi SASAKI,⁴ Hiroto IKEDA,⁵ Nobuyuki HARUNARI,⁶ Tetsuya SAKAMOTO⁵

Key words JMAT, International support, Taiwan Medical Association, Burn

Introduction

Cross-border medical support activities began with the Committee of Five, the predecessor of the International Committee of the Red Cross, which was established in 1863.¹ In Japan, in addition to the Japanese Red Cross Society, the Japan Medical Association Team (JMAT)^{2,3} is relied on for medical support in disaster-affected areas. JMAT was active in providing aid in the aftermath of the Great East Japan Earthquake, which struck on March 11, 2011.

Around 8 pm on June 27, 2015, a dust explosion occurred at a water park called Formosa Fun Coast in New Taipei City, Taiwan, when flammable colored powder used at an event exploded. On June 30, the number of burn patients totaled 498 (ultimately there were 499 patients), of which 398 were hospitalized. Of these, 277 were intensive care patients and the average burn coverage was reported to be 44% of total body surface area.

At the request of the Taiwan Medical Association (TMA) and the NGO Taiwan Root Med-

ical Peace Corps (TRMPC), the Japan Medical Association (JMA) dispatched six burn experts recommended by the Japanese Society of Intensive Care Medicine (JSICM), the Japan Association for Acute Medicine (JAAM), and the Japanese Society for Burn Injuries (JSBI). This Joint Burn Care Assistance Team of Physicians by JMA and Three Medical Societies was in Taiwan for the four days from Sunday, July 12 to Wednesday, July 15, 2015 to collaborate with the Taiwanese government, especially Taiwan's Ministry of Health and Welfare, in assisting with burn treatment. This report discusses the activities of the team in Taiwan.

Preparations Leading Up to Burn Treatment Support

On June 30, JSICM began considering transporting burn patients by air to intensive care units in Japan. By July 7, JMA had coordinated with the TMA and Taiwan's Ministry of Foreign Affairs, and had also brought together the JSICM, JAAM and JSBI to select six members

¹ Chief, Joint Burn Care Assistance Team of Physicians by JMA and Three Medical Societies. Department of Emergency and Critical Care Medicine, Nagoya University Graduate School of Medicine, Nagoya, Japan (nmatsuda@med.nagoya-u.ac.jp).

² Emergency and Advanced Critical Care Center, Kawasaki Medical School, Okayama, Japan.

³ Department of Emergency and Critical Care Medicine, Nagoya University Graduate School of Medicine, Nagoya, Japan.

⁴ Department of Emergency and Critical Care Medicine, Keio University School of Medicine, Tokyo, Japan.

⁵ Department of Emergency Medicine, Teikyo University School of Medicine, Tokyo, Japan.

⁶ Advanced Critical Care and Emergency Center, Yokohama City University Medical Center, Kanagawa, Japan.



Fig. 1 Coordination with Taiwan Medical Association and Taiwan's Ministry of Foreign Affairs
The Joint Burn Care Assistance Team's visit to Taiwan was carried out in collaboration with the Taiwan Medical Association (TMA) and Taiwan's Ministry of Foreign Affairs. The need to set up a medical system for emergencies, such as wide-area disasters was discussed. In addition, it was confirmed that there is the need to establish legislation through collaboration between the TMA and JMA for emergency medical support systems.

for the team and set the procedures for sending the team. The four days from July 12 to July 15 were designated for activities, with the members serving as advisors on burn treatment but not providing direct medical treatment.

At 10:30 am on July 12, the members met at the Chubu Centrair International Airport in Nagoya, shared information on the current status of burn treatment in Taiwan, and confirmed the guidelines for their activities. On arriving at the Taiwan Taoyuan International Airport on China Airlines, representatives from Taiwan's Ministry of Foreign Affairs and the TRMPC and reporters from many news outlets were waiting. The team then went to Taiwan's Ministry of Health and Welfare and received information about the burn treatment following the water park accident in New Taipei City. The Ministry and the TRMPC explained the support system and schedule for the team's stay in Taiwan (Fig. 1). The current status of the 498 burn patents (the final count was 499) was also reviewed (Table 1).

Visits to Hospitals in Taiwan

On July 13, the team visited the Tri-Service General Hospital and the Shin Kong Wu Ho-Su

Table 1 Number of burn victims in Formosa Fun Coast dust explosion accident

Burn patients (no.)	498
ICU (no.)	277
General ward (no.)	160
Discharge	60
Burn area average (%)	44

This is the breakdown of the injured as announced by Taiwan's Ministry of Health and Welfare on June 30, 2015. Initially, 277 patients were in intensive care units. Subsequently, one more person was added and the number of injured was revised to 499. The average burn coverage was about 44%. Of these, 11 people (2.2%) had died as of August 13, 2015, which is an extremely high rescue rate.

Memorial Hospital, followed by the Cheng Hsin General Hospital on July 14 and the Linkuo Chang Gung Memorial Hospital and Cathay General Hospital on July 15. The team visited the five hospitals in total that the Taiwan's Ministry of Health and Welfare had readied for their arrival, and shared information on treatment.

Each hospital had prepared presentations on severe cases that had been difficult to manage. They shared patient information and discussed treatment and management (Fig. 2). Subse-



Fig. 2 Presentations and discussions on severe symptoms

This is an image of discussions of cases at the Shin Kong Wu Ho-Su Memorial Hospital on July 13, 2015. The situation was tense as the patient's symptoms were extremely severe. In addition to presentations on cases of severe burns using computer projections and discussions of treatment guidelines, the team visited the rooms of patients with severe injuries and reviewed treatment guidelines on an individual basis in conjunction with the symptoms in each case.



Fig. 3 Making the rounds of the burn management unit

This is a picture of the team making the rounds of the burn center and the beds in the intensive care unit at the Tri-Service General Hospital on July 13, 2015. The treatment guidelines for individuals were discussed in conjunction with their symptoms, and treatment information was shared.



Fig. 4 Tour of operating room and specific advice on operations

At the Cheng Hsin General Hospital on July 14, 2015, the team discussed surgical guidelines in the operating room. Debridement of burn wounds, cleaning of wounds and infection management were discussed in full to arrive at management guidelines.

quently, the team went on hospital rounds for the burn center (**Fig. 3**), the critical care unit, and the hospital wards and toured the operating rooms (**Fig. 4**), and then thoroughly discussed the management and treatment guidelines for each patient in terms of the management of the burn wound, consciousness, breathing, circulation, infection, nutrition, regeneration and rehabilitation. The team recognized the advanced

burn treatment available at each hospital and tried to share good treatment guidelines among them. The team gave computer presentations of the burn treatment guidelines used in Japan, infection management and skin grafting with artificial dermis and cultured epidermal autograft (CEA), and then discussed these approaches at each hospital.

All of the hospitals that the team visited were treating more burn patients than normally expected, given this emergency situation resulting in a large number of burn patients. They all faced difficulties in ensuring a sufficient number of health care providers, treatment centers for whole-body management, local wound management and infection prevention.

Taiwan's Medical Volunteer System

Regarding medical manpower, retired doctors and doctors who had started their own practices returned to the medical center as medical volunteers to help with the treatment. In addition to these volunteers in Taiwan, if the dispatch of doctors and nurses from Japan were possible, the burden on critical care doctors could be reduced. It was determined that transporting burn patients to Japan, as considered by the JSICM, was not applicable due to the high standard of treatment in Taiwan and the strong desire and expectations of patients and their families to be treated in their own country, as well as the risks associated with wide-area transport.

Bedside Discussions on Whole-body Management

All of the five hospitals used the same approach to whole-body management as Japan uses in its burn treatment. However, not all of the doctors treating patients with multiple burns were experienced in burn treatment. The team was thus able to serve as intermediaries between doctors specializing in burn treatment and doctors with other specialties.

First, the team gave a presentation on the effective use of dexmedetomidine (DEX) for pain relief and mitigation, and shared information on the relationship between pain management and maintaining immunity. DEX^{4,5} is an α_2 adrenoceptor agonist widely used in Japan during the intensive care phase. In addition to a sedative effect via the locus ceruleus, DEX is effective in easing pain in the trunk of the body. The team discussed the effect DEX could have in easing sympathicotonia, as well as stabilizing circulation.

As regards respiratory care, the dust explosion caused by the corn starch used in the colored powder resulted directly in airway burns, lung injuries and accompanying respiratory infections in some patients. The inhalation burn injury⁶ caused by the dust explosion required attention and careful follow-up. As a result of the respiratory tract injuries caused by burning corn starch adhering to the trachea, extracorporeal membrane oxygenation (ECMO) was introduced. There have been cases in which patients could be removed from ECMO. There were over 20 cases in each hospital of patients requiring artificial respirators for pulmonary edema as a result of this kind of airway burn and mass transfusions required to manage extensive burns.

In cardiovascular management, there was a general understanding about the difficulty of managing the initial transfusions in the many symptoms present when burns cover more than 40% of the body. The team discussed management guidelines for fluid therapy in the case of severe inflammation, as seen with sepsis and burns, including an approach to restoring fluid balance using pulse pressure variation (PPV) and stroke volume variation (SVV) for waveform analysis of pulse waves,^{7,9} and circulation management through ultrasound scans. In addition, we discussed treatment guidelines for cases

in which cardiac tamponade and large-volume pleural effusion, which can occur with transfusions in extensive burns, function as restrictive factors for the heart and thus impede circulation. In confirming these individual cases, treatment guidelines were discussed at the bedside and treatment guidelines were shared.

Management of Burn Wounds

Even 16 days after patients had first received the burns, there were several cases in which debridement of the burn wounds was not yet complete. Since the objective was to save the lives of the many patients with extensive burns, an approach was used in which debridement in a small area was carried out over several days and repeated while the patient was under general anesthesia. There were several severe cases, which were required escharotomies due to circumferential deep burns.

At each hospital, the team explained the general process for burn treatment, the target time for completion of debridement, wound treatment, methods for cleaning wounds, and the use of topical agents, and shared information on treatment management. The team also gave presentations using computers on the use of cultured epidermal autograft (CEA) combined with auto 6 to 1 meshed split thickness skin graft called hybrid method in Japan. In these presentations, the method using CEA, which is not yet approved in Taiwan, the “sandwich” method in which artificial dermis and autologous skin are combined, negative pressure wound therapy, and a method using silver sulfadiazine were discussed, and treatment guidelines were shared.

Management of Infection and Sepsis

There were cases in which local infection and respiratory tract infections resulted in sepsis. In addition to enteric bacteria, pathogenic bacteria such as *Acinetobacter baumannii*, Methicillin-resistant *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Candida* spp. were causing problems, and multi-drug-resistant *Acinetobacter* infections were confirmed in particularly high numbers. The team shared information about the status of the management of multi-drug-resistant bacteria in Japan and effective monitoring of bactericide blood concentration levels, as well as

the effectiveness of measuring plasma (1→3)- β -D-glucan¹⁰ in managing fungi and the appropriate use of antifungal agents.

Coordination with Taiwan's Ministry of Health and Welfare

After visiting the hospitals, the team stopped by the Ministry of Health and Welfare every day to report on the status of burn management at the hospitals and share information on its activities. The Ministry considered the use of CEA, which was approved for manufacture by Japan's Ministry of Health, Labour and Welfare as Japan's first human cell/tissue-engineered medical device (product name: JACE[®], Japan Tissue Engineering Co., Ltd., Japan)¹¹ on October 29, 2007. In addition to describing the characteristics of CEA and the pros and cons of its use, the team provided specific information on whole-body management, such as the exact skin grafting methods for burns (burn management using artificial dermis and CEA that has been preserved), optimizing debridement, wound management using negative pressure wound therapy, methods for cleaning wounds, infection and sepsis management, and pain management and mitigation. Files of the presentations given by the team were provided to the Ministry of Health and Welfare and the respective hospitals via the TRMPC.

In Closing

The Joint Burn Care Assistance Team's work in Taiwan confirmed the need for medical collaboration between Taiwan and Japan in accidents resulting in multiple casualties. The visits to the five representative hospitals—the Tri-Service General Hospital, the Shin Kong Wu Ho-Su Memorial Hospital, the Cheng Hsin General Hospital, the Linkuo Chang Gung Memorial Hospital and Cathay General Hospital—affirmed the effectiveness of treatment collaborations in emergency situations. The team informed the JMA and Taiwan's Ministry of Health and Welfare of the need to establish a mutual support system in both countries to respond to multi-casualty events in Taiwan and Japan. Discussions with medical professionals from

Taiwan's Ministry of Foreign Affairs, Ministry of Health and Welfare, the TMA, the TRMPC and others (**Fig. 1**) demonstrated the importance of medical interaction between the two countries.

Acknowledgments

We would like to express our deep gratitude to Yoshitake Yokokura (JMA), Masami ISHII (JMA), Tetsuo Yukioka (JAAM), Yoshihito Ujike (JSICM), Hiroaki Nakazawa and Hajime Matsumura (JSBI), the JMA, JSICM, JAAM, JSBI, TMA, the Taiwanese government, especially the Ministry of Health and Welfare, and TRMPC for the support given during our stay in Taiwan. We are grateful for the opportunities to exchange views with representatives from the TMA and Taiwanese government and the chance to give an optimistic report on the direction of joint medical support. Moreover, we are sincerely grateful to everyone at the Tri-Service General Hospital, the Shin Kong Wu Ho-Su Memorial Hospital, the Cheng Hsin General Hospital, the Linkuo Chang Gung Memorial Hospital and Cathay General Hospital, and Yen Ta Huang (Tzu Chi University), who took time from their busy schedules to have such fruitful discussions with us. We are praying for the recovery of everyone hurt in this incident.

References

1. International Committee of the Red Cross. <https://www.icrc.org/eng/who-we-are/history/overview-section-history-icrc.htm>.
2. Ishii M. Activities of the Japan Medical Association Team in response to the Great East Japan Earthquake. *JMAJ*. 2012; 55(5):362-367.
3. Ishii M, Nagata T. The Japan Medical Association's disaster preparedness: lessons from the Great East Japan Earthquake and Tsunami. *Disaster Med Public Health Prep*. 2013;7:507-512.
4. Hoy SM, Keating GM. Dexmedetomidine: a review of its use for sedation in mechanically ventilated patients in an intensive care setting and for procedural sedation. *Drugs*. 2011;30;71:1481-1501.
5. Nelson S, Muzyk AJ, Bucklin MH, Brudney S, Gagliardi JP. Defining the role of dexmedetomidine in the prevention of delirium in the intensive care unit. *Biomed Res Int*. 2015;2015:635737.
6. Beausang E, Herbert K. Burns from a dust explosion. *Burns*. 1994;20:551-552.
7. Pinsky MR. Functional haemodynamic monitoring. *Curr Opin Crit Care*. 2014;20:288-293.
8. Hofer CK, Cannesson M. Monitoring fluid responsiveness. *Acta Anaesthesiol Taiwan*. 2011;49:59-65.
9. Matsuda N. Treatment strategy for sepsis and septic shock. *The Journal of the Japan Medical Association*. 2016;144:2031-2035. (in Japanese)
10. Weiss E, Timsit JF. Management of invasive candidiasis in non-neutropenic ICU patients. *Ther Adv Infect Dis*. 2014;2:105-115.
11. Japan Tissue Engineering Co., Ltd. <http://www.jp-te.co.jp/english/>.

APEC Business Ethics for SMEs*¹ Forum

JMAJ 59(1): 17-18, 2016

Masami ISHII¹

The Asia-Pacific Economic Cooperation (APEC) Business Ethics Forum is held every year, and I have been invited to participate in the satellite Forum of Promoting Ethical Business Environments in the Medical Devices and Biopharmaceutical Sectors, as a delegate from the Japan Medical Association (JMA) and executive officer of the World Medical Association (WMA) for the past three years. I have attended three APEC Business Ethics Forums: in Bali, Indonesia, on September 3, 2013; at Nanjing, China on September 1-3, 2014; and at Manila, The Philippines, on August 19-20, 2015.

In 2014, the Nanjing Declaration was adopted with the purpose of promoting an ethical environment through 2020. It has become very important to affirm such guidelines because of the rapidly expanding economic growth in the Asia-Pacific region, which is where the world's population is centered in today. This means that there is great potential for the health industry, with demand increasing for medical devices and pharmaceutical drugs to promote people's health and health systems. There is an urgent need for government and private sectors to establish common ethical guidelines for ensuring adequate growth of these fields in each country.

The 2015 Forum was attended by three hundreds participants from fifteen countries and one region: Australia, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, Peru, The Philippines, Singapore, Thailand, The US, and Vietnam. I took part in the biomedical product sector session as a presenter from the medical profession. There was discussion of establishing cooperation amongst governments, health professionals, and other

stakeholders in the industrial world in order to sustain high ethical standards by enterprises in the biopharmaceutical sector. I also joined the panel session regarding healthcare professionals' dialogue on embracing ethical interactions with industry within the context of Patient-First approaches. I presented basic introductions of the WMA Declarations of Geneva and Helsinki; the former emphasizes the priority of the health of patients, and the latter states the importance of establishing research ethics committees. We were able to establish ethical guidelines through the discussion process in Manila.

In Nanjing, I visited the mausoleum of Dr. Sun Yat-sen between discussion. The founder of modern China was also a medical doctor who also treated his country. Dr. Sun's chief political philosophy is known as the Three Principles of the People: Nationalism (non-ethnic nationalism; independence from imperialist domination), Democracy (Western constitutional government), and the People's Livelihood (free trade capitalism and Georgist tax reform). At the entrance to the mausoleum I found umbrella-shaped pine trees that had been gifts from Japan at the time of our visit in 2014.

I traveled to Leyte Island after the 2015 Forum in Manila to visit the newly built House of the Leyte Medical Society (LMS), which was donated by the members of the JMA after Leyte Island suffered a direct hit by huge typhoon Yolanda in November 2013, with heavy winds and high waves. Houses were still under reconstruction, especially along the seashore areas. The new House was on a hill and had already begun to play a role as a new center for members of the LMS, even though interior construc-

*1 SMEs: small and medium enterprises.

¹ Executive Board Member, Japan Medical Association, Tokyo, Japan (until June, 2016).

tion had not yet been completed because of the increased cost of construction in the region in the wake of the terrible disaster. I was welcomed by President Dr. Maria Elvira Casal, Past-president Dr. Mina Sirikit Claridad-Tagra, and other members of LMS, and I came home with very positive impressions, confident that our donation efforts had achieved effective results.

I also visited the memorial park for war victims and the historical landing site for the return

of General Douglas MacArthur after one of the most severe battles between the US and Japan involving local inhabitants in the bay during WWII. The sea in Leyte Bay was calm and colored deep blue when I visited.

Thus, our countries are intertwined and involved in many aspects of the history of our region, and I believe that our obligation as health professionals will continue to exist within the humanitarian contribution in the future.



The Author in Panel Session regarding Healthcare Professionals Dialogue (second from left)

The Significance of *iJMAT*: A New Framework for International Disaster Medicine Support

JMAJ 59(1): 19-24, 2016

Takashi NAGATA¹

About *iJMAT*

In light of the Great East Japan Earthquake in 2011, Japan must prepare for Tokyo Metropolitan earthquake, Tokai/Nankai earthquakes in the south-east and south oceans, and other unprecedented catastrophes. We need to realize the situation that we have no choice but to accept foreign medical relief efforts. Therefore, we are investigating the framework of medical assistance that utilizes our functions as a medical association.

The term *iJMAT* is an abbreviation of the international Japan Medical Association Team, which refers to international teams of disaster medicine organized by the Japan Medical Association (JMA). JMA has been involved in various humanitarian assistance for disasters abroad for a long time. Those activities of collecting and offering donations, and building medical facilities in the disaster affected areas have contributed to the reconstruction of disaster-stricken areas. *iJMAT* will enable JMA to respond to the needs of the time and the society, and become actively involved in disaster medical support across borders.

The key points of *iJMAT* are as follows.

- It provides a framework of foreign medical assistance in times of large-scale disaster for accepting or sending medical teams from or to foreign countries, respectively.
- The national medical associations will authenticate the dispatched medical teams, coordinate, and manage them.
- It complies with the Incident Command System (ICS), Sphere Standards, and the World Medical

Association (WMA) Declaration of Montevideo. *iJMAT* is drafted as follows.

Prerequisites for accepting foreign medical assistance in large-scale disasters

1. “A state of emergency due to disaster” (or similar situation) has been proclaimed based on the Disaster Countermeasures Basic Act.
2. Ministry of Foreign Affairs has processed the offers of medical assistance to the Japanese government from abroad.
3. The foreign medical assistance is accepted based on the following “mutual consent” items between the JMA and medical associations abroad that stipulate medical assistance in times of disaster.
 - (1) Approval of the dispatched physicians’ qualifications: Evaluation and approval of the qualifications and technical requirements of the dispatched physicians and medical staff.
 - (2) Presentation of identities of the dispatched foreign physicians and medical staff: The identities of the foreign dispatched physicians and medical staff should be guaranteed by the dispatching medical associations.
 - (3) Range of medical relief activities: During a large-scale disaster in Japan, the dispatched foreign physicians will carry out their medical relief activities as members of the Japan Medical Association Teams (JMATS), with compensation equivalent to JMATS in the event of a secondary disaster. The JMA will arrange their missions including the locations and hours to offer medical relief assistance, and the range of

¹ Visiting Researcher, Japan Medical Association Research Institute (JMARI), Tokyo, Japan (until September, 2016). Department of Advanced Medical Initiatives, Faculty of Medical Sciences, Kyushu University, Fukuoka, Japan (nagata.takashi@kyudai.jp).

duties.

Systems for accepting medical assistance from abroad in large-scale disaster

1. Schemes of medical assistance team
It should be a self-contained regime (capable of providing the necessary medicines, medical equipment, food, water, fuel, etc. on their own).
2. Composition of medical assistance team
 - (1) Enough interpreters should be sent to meet the need.
 - (2) Japanese physicians with experience in international cooperation should also be sent.
3. Duration of medical assistance
The maximum duration per medical assistance team should be about 2 weeks.
4. Range of activities of the dispatched members
 - (1) Instruction on the locations and hours
The local disaster management headquarters of the recipient municipalities that requested assistance will manage the activities (just as in JMAT) and instruct members on the locations and hours to offer assistance.
 - (2) Coordination of activities
Municipal medical associations in charge of the recipient municipalities will coordinate medical relief activities.

Overview of the Great East Japan Earthquake and the Lessons Learned

The Great East Japan Earthquake that struck Japan at 14:26 on March 11, 2011, caused significant damage over extended areas due to giant quakes followed by the large-scale tsunami affecting the prefectures of Aomori, Iwate, Miyagi, Fukushima, Ibaraki, and Chiba. Moreover, the core meltdowns of the Numbers 1, 2, and 3 reactors of the TEPCO Fukushima Daiichi Nuclear Power Plant led to a series of explosions, and the subsequent breach of a large amount of radioactive materials was added to the disaster. In addition to the death of 18,000 people, roughly 400,000 people had to seek shelter in the 500km disaster zone. In light of this, the JMA decided to dispatch JMATs to the 4 prefectures that particularly suffered major damage—namely, Iwate, Miyagi, Fukushima, and

Ibaraki—and consulted and requested the prefectural medical associations across the nation about the geographical assignments for dispatch. After about a month, the Ibaraki Prefecture Medical Association notified the JMA that locally available medical support would suffice, so the JMATs dispatch focused on the remaining 3 prefectures. July 15, 2011 was marked as the end of the first phase of JMAT, and the activities up to this point were collectively named the JMAT, whereas the second phase is called JMAT II. In summary, a total of 1,398 JMATs consisting of about 6,000 medical professionals were sent when counting from Day 0. As many as 60 teams were in the field during the peak period from March 25 through May 22, with the maximum of 100 teams on April 10.

In addition to JMAT, the Japanese government dispatched 385 teams of the Disaster Medical Assistance Teams (DMATs) consisting of 1,871 medical professionals to the disaster-affected areas. The DMATs' main duty, which is to provide long-distance medical transport for those injured as a direct result of a natural disaster, handled 19 patients in March 12-15; as the result of the nuclear disaster, about 700 were also evacuated and transported in March 19-21 from the 6 hospitals in Soma City, Fukushima.

In the aftermath of the Great East Japan Earthquake, both the JMA and the Japanese government's DMATs had no capacity to accept foreign medical assistance. The medical assistance accepted from abroad by the Japanese government was as follows. Over 30 nations offered medical assistance to the Japanese government. The Ministry of Foreign Affairs presented the following "scheme for medical assistance from abroad" to the disaster-stricken municipal governments as the prerequisite for receiving assistance.

- (1) Should be a self-contained regime (capable of providing the necessary medicines, medical equipment, food, water, fuel, etc. on their own).
- (2) Enough interpreters should be sent to meet the need.
- (3) Japanese physicians with experience in international cooperation should be also sent.
- (4) The duration should be 2 to 4 weeks (but decided case-by-case).
- (5) A local disaster management headquarters should manage their activities.

(6) The government should cooperate on the smooth clearance of medicines and test equipment through the customs.

Consequently, disaster medicine teams from the following 4 nations were accepted. A brief overview of the assistance offered is summarized below.

- Israel: 53 members in total, including 14 physicians, 7 nurses, 32 technicians, and others → scheduled to work for about 2 weeks from March 29; worked with the physicians of Minami Sanriku City.
- Jordan: 4 members in total, including 2 physicians and 2 sonographers → scheduled to work for about 3 weeks from April 25th; worked with the physicians of Fukushima Medical University.
- Thailand: 2 members in total, including 1 physician and 1 nurse → scheduled to work for about 2 weeks from May 9; worked with the physicians of Fukushima Medical University.
- The Philippines: 3 physicians → scheduled to work for about 2 weeks from June 28; worked with Japanese physicians and clinical psychologists.

The one of the lessons learned from the Great East Japan Earthquake was that it was not easy to accept foreign medical assistance teams in a large-scale disaster. It is therefore important to establish such a framework in advance to prepare for the large-scale disasters that can strike Japan in the future.

Emergency Medical Teams (EMTs)

The Foreign Medical Teams (FMTs) or Emergency Medical Teams (EMTs), which the World Health Organization (WHO) played a main role in developing its guidelines, is an international humanitarian aid system to categorize and standardize functions and enable registration, coordination, and authorization.¹

The following problems were identified in the EMT activities at sites relating to the 2004 Sumatra earthquake, 2005 Pakistan earthquake, and 2010 Haiti earthquake.

- Timely assistance was not smoothly carried out.
- The ability of EMTs varied.
- A large gap existed between the medical needs in the disaster-stricken nations and the support available from EMTs. More specifically, there were no international standards, it was not clear who authorizes EMTs, and the quality of care

was not managed.

- In addition, the disaster-stricken countries were often not equipped with the ability to manage EMTs.

In consideration of these issues, WHO prepared the EMT guidelines with the 5 following goals.¹

- Provide prompt assistance by having in-advance coordination and registration.
- Dispatch EMTs that match the medical need of the affected countries.
- Guarantee a minimum quality of care (i.e., member management based on the capacity in disaster medicine, and accountability for medical practice).
- Establish and standardize a registration system to eliminate risky medical practice.
- Improve the coordination ability of the receiving countries.

The abilities desirable for EMT members include competencies in triage, capacity for humanitarian aid, safety management, understanding of different cultures and languages, logistics, communication, and faculty for teamwork. It should be noted that this EMT initiative is a one-sided model, which assumes that developed nations with high medical standards are providing humanitarian aid to underdeveloped nations that are experiencing sudden disaster. Furthermore, the specific authorities of the providing/receiving countries in charge of coordinating EMTs can vary, and the EMT guidelines do not clearly stipulate the involvement of national medical associations in the providing/receiving countries. The framework of *i*JMAT is therefore unique, and shows JMA's original approach to EMTs.

***i*JMAT Activities**

October 2014: Consultation with the U.S. Embassy

The JMA consulted with the U.S. Minister Counselor Steven S. Maloney and other staff of the U.S. Embassy to evaluate the *i*JMAT concept and also to investigate the ideal approach to medical assistance for the U.S. residents in Japan in the event of Tokyo Metropolitan earthquake, or the Nankai Trough earthquake that will directly affect the southwestern coastal area of Japan. The U.S. Embassy understood the *i*JMAT concept and mentioned that we needed to pre-

pare to care for the U.S. residents living in Japan in times of large-scale disaster. They also suggested flexible incorporation of U.S. Armed Forces medical teams with helicopters within the framework of *i*JMAT. JMA informed the U.S. Embassy that it is working to reach an agreement with the American Medical Association (AMA), and the Embassy expressed their willingness to cooperate.

February 2015: Consultation with Harvard University

JMA had received many suggestions from members of Harvard University when planning JMAT before the 2011 Great East Japan Earthquake. In order to confirm the validity of the *i*JMAT concept, we consulted with Dr. Stephanie Kayden, the director of the Harvard Humanitarian Initiative, and Professor Jerold Kayden, a professor of Urban Planning and Design at the Harvard University Graduate School of Design, who also has served as the law clerk to a U.S. Supreme Court justice. They shared their conclusion that *i*JMAT is valid in light of the principals of international humanitarian aid and law. They also implied that concluding an agreement with JMA will be difficult for AMA for various reasons.

May 2015: Planned dispatch of medical teams from the Okinawa Prefecture Medical Association in the Nepal earthquake

In Nepal, an earthquake of magnitude 7.8 hit near the capital Kathmandu on April 25, 2015. The strong earthquake collapsed buildings and caused avalanches and landslides, bringing serious damage to the nation. The earthquake also resulted in human suffering in the neighboring areas, including India, the Tibet autonomous region of China, and Bangladesh. Many countries swiftly moved to assist in the rescue, but their efforts were hindered by various factors such as aftershocks, shortages of heavy machinery, medical facilities, and physicians, the underdeveloped Tribhuvan International Airport, and poor accessibility to isolated villages and settlements in mountainous areas. On April 29, despite this situation, the Nepal government requested the international community not send any more search-and-rescue teams, claiming that they had sufficient human capacity for such missions.

JMA sent Professors Masamine Jimba and Taro Yamamoto, members of the JMA Global

Health Committee to Nepal; they carried out a field survey and reported on the status of damages in the affected mountainous areas. Dr. Shigeru Suganami, President of the Association of Medical Doctors of Asia (AMDA) Group, who is also a member of the JMA Global Health Committee, was also sent to Kathmandu. AMDA had been previously involved in medical assistance in Nepal, so it had already established the network with local liaisons. Moreover, Dr. Suganami could obtain detailed information on the damage status from vice-president of the Nepal Medical Association, who was also the AMDA Nepal Branch manager. Kathmandu and the neighboring settlements suffered serious damage, but there was no need for acute medical care because it was not possible to collect the injured in mountainous terrain. On the other hand, the reconstruction efforts by local communities were already in progress, and the need for chronic care assistance was deemed unnecessary.

The JMA had considered dispatching medical teams organized by the Okinawa Prefecture Medical Association with the help of the Nepalese, who are in Okinawa for a study abroad program, as the *i*JMAT members from early May. However, JMA ultimately decided to shelve the plan as no such need was anticipated.

July 2015: Explosion accident in Taiwan

At the water park Eight Immortals Paradise in New Taipei City, Taiwan, the colored powder that was used during an event caught fire and resulted in an explosion accident on June 27, 2015, shortly after 20:00. A total of 525 people were injured, of which 398 were hospitalized, including 213 intensive care patients (as of July 12). The Taiwanese government requested that the JMA offer medical assistance to the burn patients. JMA had already been discussing an exchange of medical teams as *i*JMAT with the Taiwan Foreign Ministry and the Taiwan Medical Association in preparation for a potential large-scale disaster, such as the Nankai Trough earthquake, so the requested dispatch was successfully coordinated with the shared understanding of both parties. Dr. Suganami, AMDA President, was immediately sent to Taiwan to investigate the situation and identify their medical needs. The Chinese government started to pressure Taiwan immediately after the accident, and insisted on its accepting medical teams consist-

ing of 300 members.

In respond to the Taiwanese government's request, the JMA selected 6 burn care specialists from the Japan Association for Acute Medicine, Japanese Society of Intensive Care Medicine, and Japanese Society for Burn Injuries for their help. With the cooperation from the Taiwan Medical Association, these 6 specialists were sent to Taiwan for 4 days (July 12-15) as the Taiwan Burn Care Assistance Team; they visited 5 main facilities managing the burn care cases and assisted the local medical professionals. The medical assistance was successfully provided by their offering opinions on certain cases that Taiwanese professionals found challenging. There was a discussion of long-distance medical transport to Japan for further treatment for some serious cases; however, the transport was passed up because of the accompanying risk. Clinical application of artificial skin was also undertaken.

The success of the burn care assistance for Taiwan demonstrates what JMA advocates through *i*JMAT: that the dispatch and operation of international medical assistance in times of disaster, based on mutual approval and coordination by both national medical associations involved, is practical and valid.

Direction of the Future *i*JMAT

Strengthen JMA functions and gain understanding of prefectural/municipal medical associations

In order for the *i*JMAT to develop and operate smoothly in the upcoming missions, it is essential to gain the understanding and cooperation of the JMA members as well as the prefectural and municipal medical associations across the nation. The JMA will have to advocate the basic philosophy of *i*JMAT to wide-ranging audiences, including its members and medical personnel, to gain their understanding and develop the human resources for the *i*JMAT through workshops and seminars.

Collaborate with national medical associations worldwide in times of peace to collect information and establish a network of working relationships

In both the incident of the Nepal earthquake in May 2015 and the explosion accident in Taiwan in July, the organization AMDA and Dr. Shigeru

Suganami were crucial to the JMA in conducting a field survey and establishing a network for operation before the actual dispatch of *i*JMAT began. In particular, their year-long experience and network that Dr. Suganami has created in the field of international humanitarian aid activities were indispensable. JMA will have to continue to maintain the appropriate balance of organizational power in the *i*JMAT and the human network supporting the *i*JMAT system.

At the 3rd meeting of the JMA Global Health Committee for FY2015 (July 9, 2015), Dr. Suganami described that he recalled the JMA's response to the Nepal earthquake. Ordinarily, disaster medicine teams sent from the developed countries to underdeveloped countries that have met disaster—Nepal, for example—will focus on providing advanced medical care such as surgery; it was a one-sided approach from a developed county to an underdeveloped one. In the Nepal earthquake, however, the Tribhuvan University Teaching Hospital in the capital Kathmandu declined the assistance of foreign medical teams for the trauma patients' surgery relating to the quake; the medical teams consisting of Nepalese successfully completed the task. Dr. Suganami also reported that many of those Nepalese staff received clinical training in Japan. Dr. Suganami referred to these circumstances as the "change of the phase." His report illustrates that the situation about the activities of international humanitarian aid is changing dramatically, and continued efforts will be required for successful aid.

Update the disaster-related technology (drones, smartphones, satellite communications, cloud technology, etc.)

The introduction of new technology, such as drones, smartphones, communication satellites, and the cloud technology, is greatly changing disaster management. The information gap between our everyday life at home and the disasters that occur inside and outside of Japan will only decrease. Considering the situation that the public look for this trend furthermore, disaster management should be provided as real-time responses. On the other hand, the information obtained from these technologies do not necessarily show the whole picture of a disaster. Thus, disaster relief needs to incorporate information obtained through "person-to-person," networks as the aforementioned examples demonstrate.

Understand and update the Incident Command System, Sphere Standards, and the WMA Declaration of Montevideo

The basic policy of *iJMAT* activities needs to comply with the 3 international guidelines and standards. The first one is the Incident Command System (ICS), a command system tool for crisis management that the U.S. Federal Emergency Management Agency endorses. It is essential that medical teams from abroad follow the coordinated lines of command based on the ICS principles when working at disaster sites.

The second one is the set of standards called the Sphere Standards, or The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response.² The Sphere Standards initially assumed a disaster that occurs in a remote area of an underdeveloped country. However, global warming has increased the frequency of disasters that affect urban areas in recent years. Unfortunately, the current Sphere Standards do not cover urban disasters. The new standards on urban disasters are expected to be added in the upcoming revisions of 2016.

The third is the WMA Declaration of Montevideo on Disaster Preparedness and Medical Response.³ The declaration stipulates the need to “promote a standard competency set to ensure consistency among disaster training programs for physicians.” The staff involved in *iJMAT* activities will need to understand and practice these 3 guidelines and standards. Timely updates on knowledge about the most recent revisions will also become important because these guidelines and standards are revised as needed.

Prepare for future crisis (eg., Tokyo Metropolitan earthquake, Nankai Trough earthquake, and potential refugee problems abroad)

In Japan, scientists anticipate an epicentral earthquake directly occurring at the capital or the Nankai Trough. The framework of the *iJMAT* can solve the problem of providing care for foreign residents who suffer from a disaster and accepting foreign medical teams for disaster relief. However, the impact of disasters-natural or human-made tends to reach beyond borders in recent years. The flow of Syrian refugees into European nations is quite alarming for Japan when we consider the possible fall of the North Korean government and a potential inflow of refugees in light of the current international affairs involving Japan. The refugees from North Korea may have serious malnutrition and a history of multi-drug resistant tuberculosis; they may be armed when entering Japan. International collaboration will be imperative to manage the situation. We can expect the *iJMAT* to function as a tool for medical response in helping to resolve such challenges.

References

1. Emergency Medical Teams and World Health Organization. http://www.who.int/hac/techguidance/preparedness/emergency_medical_teams/en/.
2. The Sphere Project. <http://www.sphereproject.org/>.
3. World Medical Association. WMA Declaration of Montevideo on Disaster Preparedness and Medical Response. 2011. <http://www.wma.net/en/30publications/10policies/d3/>.

JMA-PhRMA Joint Symposium

“Searching for the Ideal Medical Scheme at the Time of Urgent Disasters in Japan and U.S.”

Yamato Room, 3rd Floor at Hilton Tokyo in Shinjuku, Tokyo, Japan
14:00-16:30, November 18, 2015

PROGRAM

MC: Ichiro Ono, *Deputy Representative/Director, Policy and Public Advocacy, Pharmaceutical Research and Manufacturers of America (PhRMA) Japan*

14:00-14:10 Opening Remarks:
Yoshitake Yokokura, MD, *President, Japan Medical Association (JMA)*

Section #1: Keynote Lectures

14:10-14:35 “Disaster Management in Japan”
Toshinori Ogata, *Deputy Director-General for Disaster Management Bureau, Cabinet Office*

Designated Remarks:
Haruhiko Hakuno, MD, *The Team Leader, Emergency and Perinatal Medical Care Team, Ministry of Health, Labour and Welfare (MHLW)*

14:35-14:55 “Japan Medical Association’s View of Disaster Measures and Practice”
Masami Ishii, MD, *Executive Board Member, JMA*
Designated Remarks:
Takashi Nagata, MD, *Visiting Researcher, Japan Medical Association Research Institute*

14:55-15:15 “Medical Preparedness Approach of the United States”
Ken Burris, *Former COO at Federal Emergency Management Agency (FEMA)*

15:15-15:35 “Introduction of Health Care Ready’s Case Studies for Social Contribution in US”
Nicolette A. Louissaint, MD, *Director of Programming of Healthcare Ready*

15:35-15:40 Break

Section #2: Panel Discussion

Moderators: Masami Ishii, MD, *Executive Board Member, JMA*
Ichiro Ono, *Deputy Representative/Director, Policy and Public Advocacy, PhRMA Japan*

Panelists: Shigeru Ogisawa, *Director for Disaster Response Operations Division, Disaster Management Bureau, Cabinet Office*
Haruhiko Hakuno, MD, *The Team Leader, Emergency and Perinatal Medical Care Team, Regional Medical Care Planning Section, Health Policy Bureau, MHLW*
Ken Burris, *Former COO at FEMA*
Nicolette A. Louissaint, MD, *Director of Programming of Healthcare Ready*

16:25-16:30 Closing Remarks:
Tony Alvarez, *Chair of the Japan-based executive committee (JBEC), PhRMA*

Greetings

Yoshitake YOKOKURA, MD
President, Japan Medical Association



This was the third joint symposium between the Japan Medical Association (JMA) and the Pharmaceutical Research and Manufacturers of America (PhRMA). Thanks to lectures and discussions from experts catered toward the various themes each year, it has truly developed into a meaningful conference.

The topic this year was “Searching for the Ideal Medical Scheme at the Time of Urgent Disasters in Japan and U.S.” Our aim was to take a closer look into the situation in the United States, to share knowledge, efforts, and challenges of both Japan and the US to explore future initiatives regarding medical systems at the national level as well as collaboration among related organizations during possible “emergencies” including large-scale natural disasters which could happen in any part of Japan and accidents during major events in the world such as the Tokyo Olympic and Paralympic Games scheduled for 2020.

Joining from the United States were Mr. Ken Burris and Dr. Nicolette A. Louissant who have deep insights into disaster preparedness and crisis management. Our Japanese team included Mr. Toshinori Ogata, Deputy Director-General and Mr. Shigeru Ogisawa, Director of the Disaster Management Bureau of the Cabinet Office, as well as Dr. Haruhiko Hakuno, the Emergency and Perinatal Medical Care Team Leader of the Ministry of Health Labour and Welfare, and Dr. Masami Ishii, Executive Board Member of the JMA, providing lectures and discussions.

I hope that this symposium provided meaning to Japan’s disaster countermeasures from a broad viewpoint beyond just the medical field.

Last year, the JMA became a Designated Public Corporation in the Basic Act on Disaster Control Measures. This year, I was appointed member of both the Central Disaster Management Council and the Disaster Prevention Promotion National Congress, taking on a major role in our nation’s disaster countermeasure administration. The outcome of this symposium will continue to be of significant reference for the JMA.

Lecture 1

Disaster Management in Japan^{*1}

JMAJ 59(1): 27-30, 2016

Toshinori OGATA¹



Developing Role-specific Disaster Management Plans by a Three-tiered Administration Consisting of the National, Prefectural, and Municipal Governments

In the Japanese Disaster Management System, a Minister of State for Disaster Management is appointed to the Cabinet, and the Disaster Management Bureau plans the basic policy on disaster management and plans and makes overall coordination on response to large-scale disasters. In normal times, Ministers of State, representatives of relevant organizations and experts form the Central Disaster Management Council in the Cabinet Office to discuss important matters such as the development of national disaster management plans and basic policies and to take charge of promoting comprehensive disaster countermeasures by indicating a major policy.

Japan is governed by a three-tiered administration: the national government, prefectures, and municipalities. The head of each level takes full responsibility for that jurisdiction in a structure similar to that of a nation. Comprehensive disaster prevention plans are developed in accordance with the roles to be performed at each stage.

In the event of a disaster, or where there is a risk of a disaster, the Cabinet Office, with the cooperation of relevant ministries and agencies, takes the lead in countermeasures, corresponding to each level of disaster with level 1 at normal times up to level 5 when a devastating disaster occurs (Fig. 1).

When a large-scale disaster occurs, an Emergency Response Team made up of director-general class members of related ministries and agencies is summoned to the Prime Minister's Office to begin talks within 30 minutes of the occurrence of the disaster. Then an extraordinary cabinet meeting is held and the Extreme Disaster Management Headquarters is established. The Headquarters, headed by the Prime Minister as the Chief, makes the policies and provides overall coordination regarding disaster emergency measures. Accurate and prompt actions are expected to be taken in response to the instructions from the Chief.

The Emergency Measures Activity Plan Goes into Action Immediately without Waiting for Assistance Request

Prompt and accurate emergency response is demanded in the event of a disaster, and to ensure its reliability, the government may establish the Onsite Headquarters for Disaster Management. For example, during the Hiroshima landslides in August 2014, the Onsite Disaster Management Headquarters was set up and headed by a State Minister of Cabinet Office. Likewise, Prefectural Disaster Management Headquarters and Municipal Disaster Management Headquarters are set up in affected areas and these administrative units coordinate operations.

Next I would like to introduce an overview of the specific plan. Fig. 2 shows an outline of current measures considered by the Central Disaster Management Council in response to

^{*1} This article is a translation of the presentation published in the Report of the JMA-PhRMA Joint Symposium held in Tokyo, Japan, on November 18, 2015.

¹ Deputy Director-General for Disaster Management Bureau, Cabinet Office, Tokyo, Japan.

Response by the Cabinet Office according to the level of a disaster			
Level	Severity	JMA Seismic Intensity	Response by the Government
Level 5 (Emergency)	Devastating	Central Tokyo: 6 Lower Other area: 6 Upper	<ul style="list-style-type: none"> Start procedure of establishment of Extreme/Major Disaster Management Headquarters Dispatch of Government Investigation Team
Level 4 (Prepare for Emergency)	Severe	Central Tokyo: 5 Upper Other area: 6 Lower	<ul style="list-style-type: none"> Holding a conference on disaster management with relevant Ministries and Agencies Dispatch of Government Investigation Team
Level 3 (Warning)	Considerable disaster occurs or expected to occur	Central Tokyo: 5 Lower Other area: 5 Upper	<ul style="list-style-type: none"> Holding a conference on disaster management with relevant Ministries and Agencies (if needed) Dispatch of Government Investigation Team (if needed)
Level 2 (Alert)	Beware of occurrence of a disaster	Other area: 5 Lower	
Level 1 (Normal)	Need to keep watching		

Fig. 1

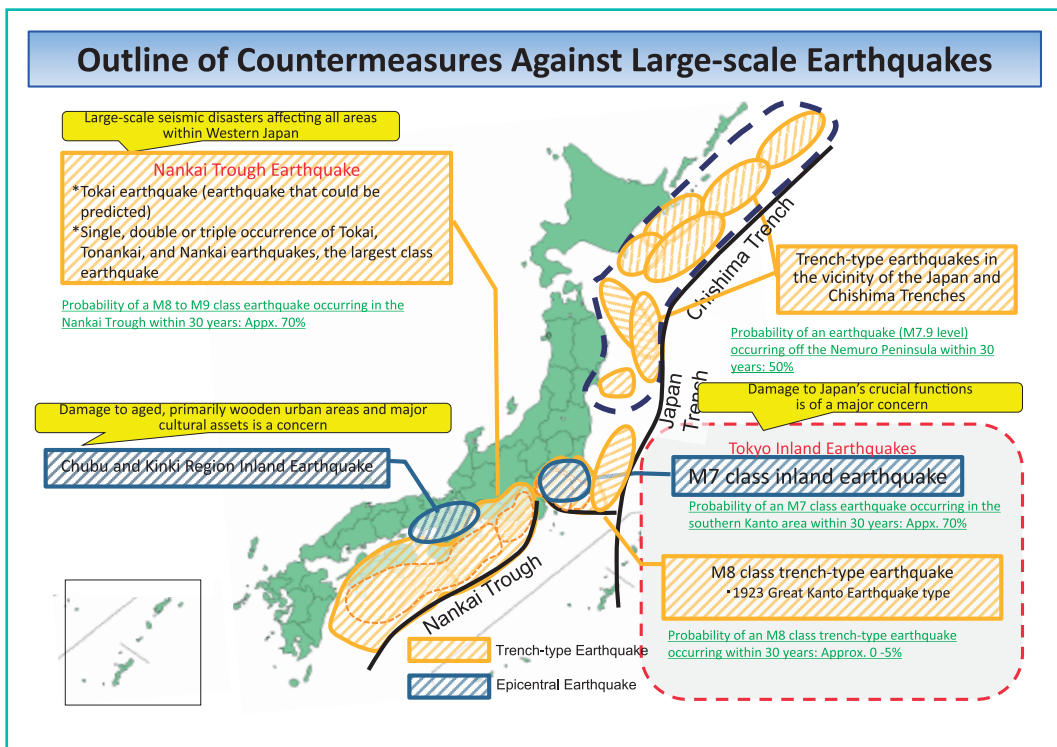


Fig. 2

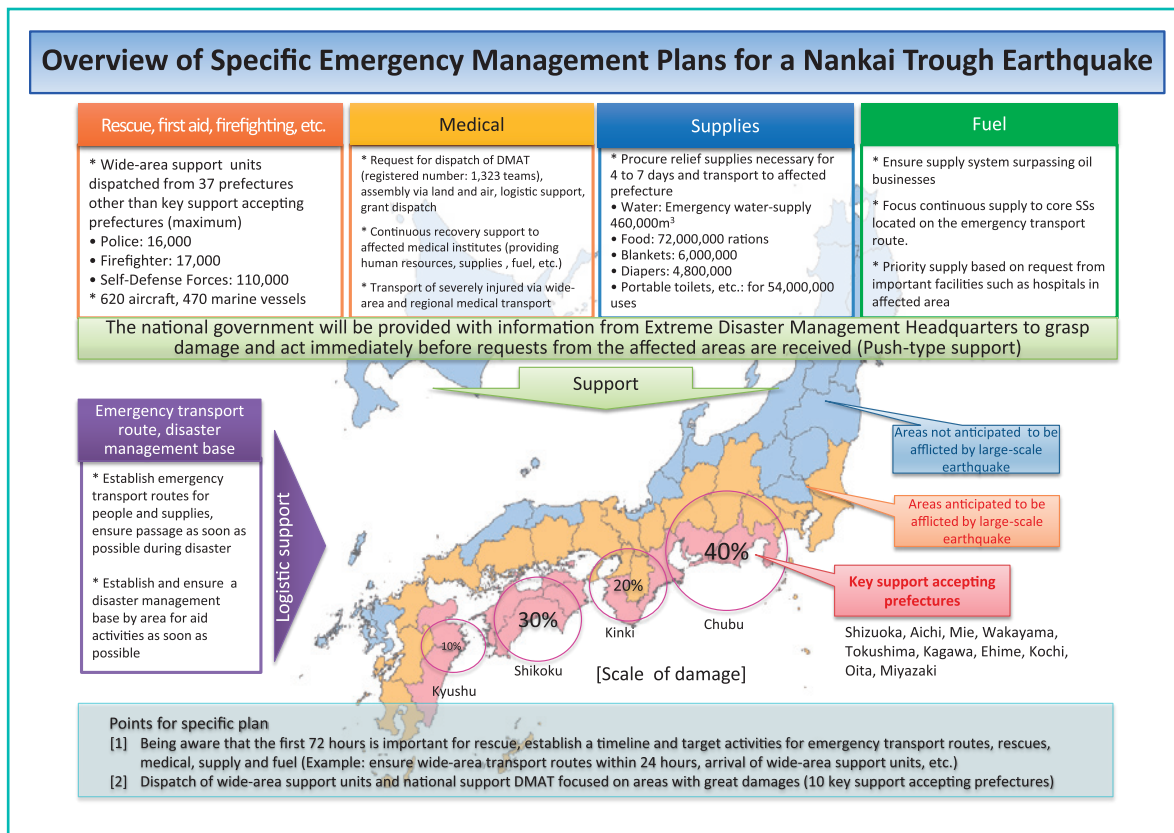


Fig. 3

large-scale earthquakes. It specifically suggests that the possibility of a Nankai Trough Earthquake (with a magnitude of 8 or 9) and a Tokyo Inland Earthquake within the next 30 years is greater than 70%. The council is presently reviewing the estimation of damage based on the Great East Japan Earthquake while promoting countermeasures.

After reviewing the damage estimation, it was assumed that a tsunami generated by the Nankai Trough Earthquake and fires that broke out in the Tokyo Inland Earthquake would cause a high proportion of deaths. In particular, a tsunami from the Nankai Trough Earthquake is expected to affect massive areas, causing enormous damage.

In March 2015, based on the estimation of these damages, the specific Emergency Management Plan for a Nankai Trough Earthquake was newly established (Fig. 3). This plan is made up of five categories in response to large-scale disasters: emergency transportation routes; rescue,

first aid, fire fighting, etc.; medical; supplies; and fuel.

By incorporating lessons learned in the Great East Japan Earthquake, its main feature is that the Extreme Disaster Management Headquarters will grasp a whole picture of the damage and action can be taken immediately without waiting for receiving requests for assistance from the affected areas. Wide-area support units such as the police, firefighter and Self-Defense Forces are planned to be dispatched with a concentration on key support accepting prefectures where great damages are expected.

For life saving, a timeline with target activities is set up for the five afore-mentioned categories while keeping in mind the initial 72-hour maximum period for rescue, coordinating each activity according to the elapsed time from when the disaster struck.

Regarding medical care, JMATS (Japan Medical Association Teams) and DMATs (Disaster Medical Assistance Teams) are dispatched over

a broad area during the initial 72 hours and requested to provide assistance to the disaster base hospitals in the affected areas. In addition,

the plan is to quickly build a backup system for treatment by transporting critical patients out of the disaster areas from air transport centers.

Designated Remarks



Haruhiko HAKUNO²

The Ministry of Health, Labour and Welfare (MHLW) has been advancing its policy of disaster management in three pillars, focusing on how effectively and efficiently medical care can be provided in the event of a disaster. These are: 1) setting up disaster base hospitals, 2) operating and training DMATs (Disaster Medical Assistance Teams), and 3) establishing an EMIS (Emergency Medical Information System).

As a rule, one or more disaster base hospitals is set up in every secondary medical zone. These hospitals must withstand various disasters with reinforced earthquake resistance and the like. Currently there are 695 designated hospitals across Japan that can act as bases to take in large numbers of injured victims in addition to providing medical care.

A DMAT is a medical team basically made up of four members—a doctor, two nurses, and one coordinator—with an emphasis on mobility. To date, 9,328 members of 1,426 teams have been trained. Their biggest feature is the speed at which they can start activities in affected areas. Similarly to the criteria of the government's Emergency Response Team for gathering in case of natural disasters, the DMATs across Japan automatically go into standby in the event of an earthquake with a seismic intensity of upper 5 or higher in Metropolitan Tokyo or lower 6 or higher in other areas, a tsunami warning, or a Tokai

Earthquake is announced. DMAT secretariat offices are placed in the National Hospital Organization Disaster Medical Center (Tachikawa, Tokyo) and the National Hospital Organization Osaka National Hospital (Osaka), so that they can respond to disasters across the country.

During the Great East Japan Earthquake of March 2011, 383 teams were dispatched to the affected areas. Eighty eight teams were also active at the time of the Hiroshima landslides in August 2014 and heavy rain disasters of September 2015.

The EMIS is an online system for the MHLW, governments and medical institutions in affected areas, and dispatched DMATs to share information. In order to provide swift and efficient medical care during a disaster, it is necessary to collect and share accurate information. The EMIS is the central information system in the acute phase of a disaster.

While I have outlined the three pillars related to healthcare provision, the DMAT alone cannot take on all the necessary medical care in the affected areas. The JMAT, the medical team run by the Japan Medical Association provided support at the time of the Great East Japan Earthquake for a very long time from the acute to recovery phases. I would like to take this opportunity to express my sincere gratitude to all the people involved.

To provide appropriate medical care in the event of a disaster, we need “all Japan” response system that includes collaboration with various sectors all over Japan. At the MHLW, we aim to improve disaster preparedness functions at medical institutions and listen carefully to the voices of everyone, so that people are able to receive proper medical care during a disaster.

² Emergency and Perinatal Medical Care Team Leader, Ministry of Health, Labour and Welfare, Tokyo, Japan (hakuno-haruhiko@mhlw.go.jp).

Lecture 2

Japan Medical Association's View of Disaster Measures and Practice*¹

JMAJ 59(1): 31-34, 2016

Masami ISHII¹



Ongoing Health Support That Makes Use of the Strengths of the Japan Medical Association

In Japan, community healthcare is provided under the public health insurance and the respective medical systems in accordance with local characteristics. However, when a major disaster happens, the community healthcare structure might be destroyed. One of the missions of the Japan Medical Association (JMA) is to restore healthcare in the afflicted areas under these circumstances by bringing together the forces of doctors and medical personnel across Japan.

Currently, the number of elderly people, who are socially vulnerable, is increasing in Japan, making the continuity of healthcare support, not only during the actual disaster but also for some time after evacuation, a pressing issue. The predicted Tokyo Inland Earthquake or Nankai Trough Earthquake will strike major cities that especially face this aging issue, so a disaster preparedness plan must incorporate a long-term health support component.

In addition to natural disasters, we cannot ignore the possibility of complex disasters generated as a result of chemical disasters or nuclear power plants. In the Great Hanshin-Awaji Earthquake, 83.3% of the deaths were caused by building collapse. In the Great East Japan Earthquake, 92.5% of the deaths were from drowning. A combination of the two disasters is anticipated to occur in the Nankai Trough Earthquake. A Tokyo Inland

Earthquake would result in enormous numbers of evacuees and a state of severed logistics.

The JMA is a professional organization consisting of member physicians in various medical specialties. It has a three-layered structure made up of prefectural and municipal medical associations, and covers the entire nation in a vertical direction through close collaboration at each prefectural and municipal level, and in a horizontal direction through information sharing such as by continuing medical education including disaster medicine.

By making full use of these characteristics, we can respond flexibly with diverse teams such as lifesaving at an ultra-acute phase to long-term support, until medical institutions in the affected areas recover. There are many things we can do and the range of JMATS*² activities can be very broad.

Forming *i*JMATS*³ from the Need for Collaboration of Domestic and Foreign Assistants

The roles of JMATS are shown in **Table 1**. When the concept of JMATS was initially proposed, medical support measures were devised based on the assumption that local medical institutions would be back up and running after roughly three weeks from the onset of the disaster. The DMATS*⁴ are in charge of the acute phase and after their withdrawal, JMATS take over and continue medical support activities until the local medical associations and healthcare facilities

*¹ This article is a translation of the presentation published in the Report of the JMA-PhRMA Joint Symposium held in Tokyo, Japan, on November 18, 2015.

*² JMATS: Japan Medical Association Team.

*³ *i* stands for international.

*⁴ DMATS: Disaster Medical Assistance Team (organized by the government).

¹ Executive Board Member, Japan Medical Association, Tokyo, Japan (until June, 2016).

Table 1 Roles of JMAT

- Medical care at shelters and first-aid stations
- Support medical practice of local hospitals/clinics
- (1) **Medical care in the affected areas and health management for disaster victims and local residents**
- (2) **Public health management at shelters:** Infectious disease control, health status of evacuees, diet management/improvement
- (3) Medical care and health management of **home-care patients**
- (4) Understand and evaluate the medical needs of the assigned areas
- (5) Assess the local accessibility of medical care, and provide medical care in the area that lacks medical support ("**areas of no medical support**") (e.g. mobile clinics)
- (6) Collect/understand/share local information
- (7) Support **the establishment of a liaison office for local healthcare professionals**
- (8) Transport patients
- (9) **Transfer of duties to local hospitals/clinics** after they recover their functions

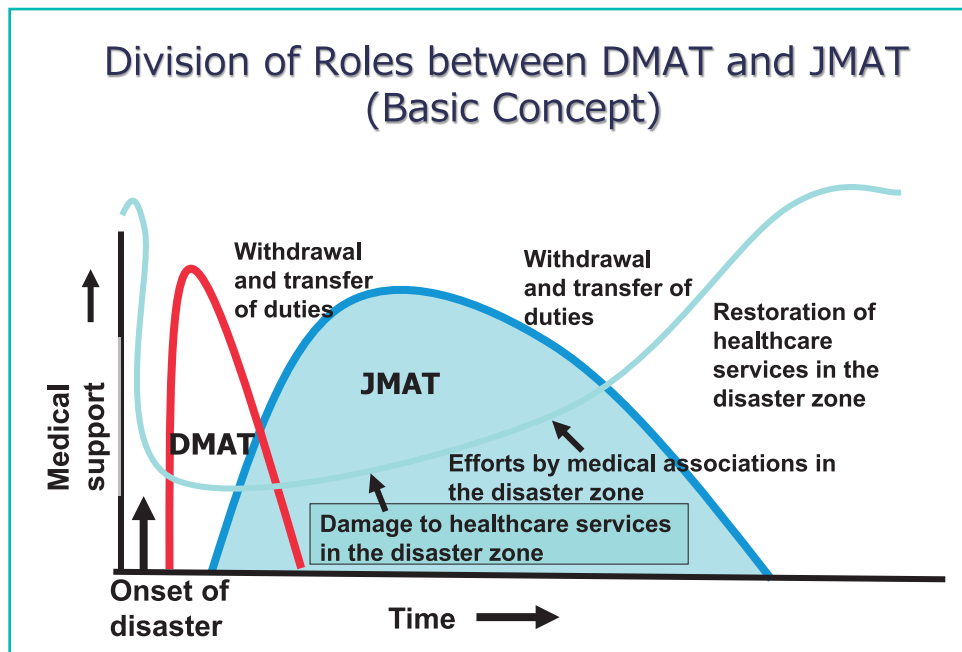


Fig. 1

ties recover, at which time they withdraw and transfer the duties (Fig. 1).

However, in reality, reconstruction of the affected areas is still inadequate five years after the Great East Japan Earthquake. More than 250 DMATs were dispatched to the field for emergency activities starting from the day of the incident. After that super-acute phase of life-saving emergency care, JMATs were dispatched under the coordination of the JMA, and the number of dispatched teams increased, with a

peak of 100 one month later, and reduced in accordance with local demand. By July 15, 2011, 1,398 teams had been dispatched to the four prefectures including Ibaraki. After that, 1,200 teams were dispatched as JMAT II to the three prefectures, Iwate, Miyagi, and Fukushima, aiming at providing support to medically deprived areas with a large number of elderly.

In the Great East Japan Earthquake, Disaster Management Headquarters were placed within the prefectural governments of the

affected areas to ease cooperation with all involved parties. In the central government, the Disaster Victims Health Support Liaison Council was established consisting of concerned ministries and agencies, and major organizations related to health, medical, and nursing care, with the JMA serving as the overall coordinator. This council is still active and prepared to take immediate action when a new disaster takes place.

One week after the disaster, a serious shortage of drugs was reported to the JMA. By collaboration with the Japan Pharmaceutical Manufacturers Association and the US military, pharmaceuticals and medical supplies were transported to Sendai Airport and Hanamaki Airport. That day, there was another request from Fukushima Prefecture and pharmaceuticals secured by the Aichi Prefecture Medical Association were transported by a private jet belonging to Mitsubishi Heavy Industries and by land by the Self-Defense Force. The JMA received many other offers from abroad to provide assistance, but had little capacity to accept them without a system for acceptance of foreign medical assistance. From this experience, the JMA formulated *i*JMAT, an “agreement between the

Japan Medical Association and foreign medical associations concerning mutual consent on dispatching physicians and assistance systems for medical relief assistance in disaster situations.” In the dust explosion accident that occurred in Taiwan in July 2015, six specialists were dispatched in response to a request for emergency medical assistance from Taiwan. Soon after that, an *i*JMAT agreement was signed with the Taiwan Medical Association.

Ensuring Means of Sharing Information through the Internet in Collaboration with JAXA

During a disaster, it is essential to instantaneously share information among the local people in charge, great numbers of medical teams, individuals, and related organizations. In 2015 a disaster drill for a possible Nankai Trough earthquake was held using a cloud type information system provided by the satellite Kizuna (WINDS) with the cooperation of the Japan Aerospace Exploration Agency (JAXA) and the National Institute of Information and Communications Technology (NICT) (Fig. 2).

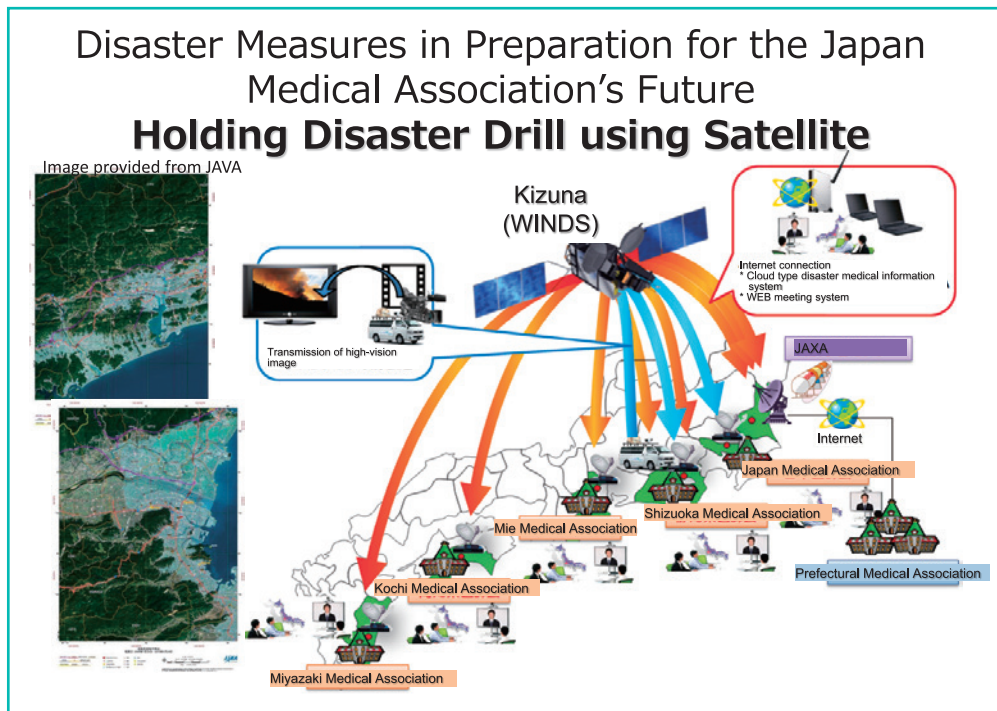


Fig. 2

Results showed that Kizuna makes it possible to see the continually changing disaster situation with high-definition imaging, and the cloud type disaster information system allows medical associations of each prefecture to share information about evacuation centers and patients, making communication smooth during dispatch team replacements when exchanging information and reporting.

This type of collaboration and information sharing requires a coordinator who is familiar with medical care in the community and makes adjustments between the dispatching organization including the JMA and the accepting medical institution. The JMA started Disaster Medicine Coordination Training in 2014. Every year, five people from 47 prefectures receive training and now there are 10 disaster medical coordinators in each prefecture. When the Kinugawa dike collapsed on September 10, 2015, the instructors

who underwent this training excelled as actual coordinators with outstanding results.

For the future, we need algorithm to move the system smoothly. In the United States, the Incident Command System (ICS) is functioning. Some of its characteristics include the delegation of authority to incident commanders on-site and the standardized basic structure in crisis management and emergency response. Its use is not limited to disasters and can be applied to criminal cases, pandemic incidents and major events such as the Olympics. The system should be widely used in Japan as well.

Personally, I have the impression that mutual relations deepen as we get more involved in all kinds of aspects of community healthcare, including disaster response. We need to work on steadily to widen and thicken our circle of collaboration.

Designated Remarks



Takashi NAGATA²

Reflecting on the insufficient cooperation between the DMAT and JMAT during the Great East Japan Earthquake, we have seriously studied ICS. The Disaster Medicine Coordination Training introduced by Dr. Ishii not only taught us about ICS, but also led us to meaningful discussions on how to make an action plan in advance and how to organize and effectively respond to disasters with limited resources. A lot of efforts have been paid, and when the Kinugawa levee collapsed in 2015, we were able to provide disaster medical care quite effectively. I believe that we are slowly moving forward.

On the other hand, when I witness incidents

such as the terrorist attacks in Paris on November 13, 2015, I can imagine the difficulty how we respond if something similar happens in Japan. As the Tokyo Olympic and Paralympic Games is upcoming in 2020, it is particularly important that we prepare for countermeasures toward mass gathering events.

The Boston Marathon bombings of April 2013 is a good example. Preparedness was thorough including ICS. By using ICS, first responders could work well with smooth chain of command and delegating authority from the top command to the chief police officer immediately after the tragedy occurred. However, currently in Japan, the main interest of the police is to control and investigate the criminal, while medical professionals are obviously focused on victims we can save. Considering this situation, we need to discuss whether it is possible to cooperate with the police. Hopefully we can share and learn from the US experience.

² Visiting Researcher, Japan Medical Association Research Institute, Tokyo, Japan (until September, 2016) (nagata.takashi@gmail.com).

Lecture 3

Medical Preparedness Approach of the United States*¹

JMAJ 59(1): 35-37, 2016

Ken BURRIS¹



The National Disaster Medical System (NDMS)

Disaster medical care in the United States started as an augmentation to the Department of Defense's ability to provide medical services to the troops in the 1940s to 1950s. In the 60s, 70s, and 80s, it evolved into a process that supported disaster responses in the US, and the Federal Emergency Management Agency (FEMA) was created by then President Carter in 70s.

The FEMA is in charge of planning, coordinating, and operating emergency and disaster measures at the federal level. It belongs to the Department of Homeland Security. Of the FEMA responses to emergencies and disasters, the medical care activities are based on the Emergency Services Function (ESF) 8. For the purpose of providing emergency disaster medical care in disaster affected areas, which is the core activity of ESF 8, the National Disaster Medical System (NDMS) was developed.

The NDMS is a strong partnership between the Department of Health and Human Services, the Department of Defense, the Department of Veteran Affairs, and the Department of Homeland Security, and is coordinated by the FEMA (**Fig. 1**). It operates in a powerful partnership with three entities: the federal government, local jurisdictions and service providers, and non-governmental organizations.

Its commitment to disaster is made up of a cycle that progresses in the order of Prepare, Respond, Communicate, and Recover. The most

important is the phase between Communicate and Recover. This is where victims of a disaster can share the various lessons they learned in the disaster and regain their social life and health and make it work to prepare for the next disaster. For NDMS to provide a medical contribution in a disaster as an effective system, it constantly reviews and improves each phase of the cycle and responds adequately.

Ideal Management of a System of Systems

The medical system is complex on its own even in peace times and it becomes even more complex in the event of a disaster. Effective operation at the disaster area becomes difficult. It is necessary to create an environment of smooth activity in the medical field even in the middle of an emergency or disaster. What is most important here is to manage a System of Systems that organically combines multiple systems.

There are many processes that need to be completed from when the incident happens until full recovery including life-saving treatment, triage, family services, and rehabilitation (**Fig. 2**). The processes do not only involve members of the medical teams but also include mortuary teams and people in charge of identification and DNA analysis. The multidisciplinary staff members all take part in the assistance, collaborating and cooperating with each other until full recovery.

The amount of time needed for full recovery is never the same. In New Orleans, after Hurri-

*¹ This article is a translation of the presentation published in the Report of the JMA-PhRMA Joint Symposium held in Tokyo, Japan, on November 18, 2015.

¹ Former COO, Federal Emergency Management Agency (FEMA), USA (mstygles@wittobriens.com).



Fig. 1

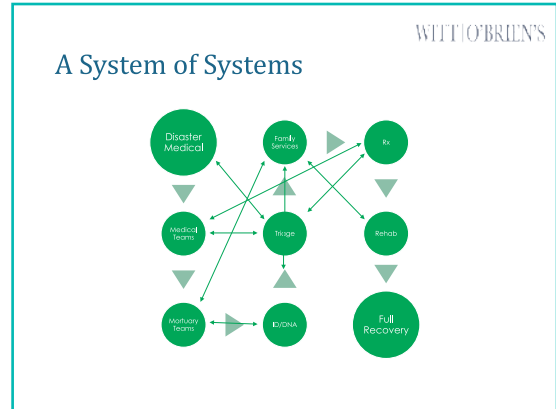


Fig. 2

cane Katrina struck the southeastern region of the US, it has taken ten years to rebuild the Charity Hospital, the largest hospital in the area. For a disaster area to rebuild a resilient community and regain a stable environment is much more difficult than one can imagine.

After the disaster, many people tend to focus their efforts on short-term disaster responses such as firefighting and first aid, and overlook this arduous process of recovery such as how to regain their previous living environments, medical care and the health of each individual. However, when you start managing the system of systems, an extremely wide range of support is required, from trauma surgery to family services, mental health issues and physical and emotional rehabilitation. It is important to enhance the mutual operability of the systems that are placed into the disaster medical system.

The complicating factors that you are faced with in these systems run from the lack of capacity in supply chain related to the procurement of pharmaceutical and medical supplies. In preparation for a breakdown of the regular logistics network for a few days or even up to weeks after the incident, a system should be developed for the speedy procurement of pharmaceutical and medical supplies to the disaster area by placing orders to federal materials storage plants and securing methods of transport. Also as another issue, sustained attention should be given to building and strengthening community resiliency (the ability to respond and to recover) while working towards a particular systematic approach and multifaceted solution.



Fig. 3

National and Local Roles during a Disaster

Funding by the federal government is an important base for disaster medicine in the United States. It is the funding that acquires capital assets that make the system work, to coordinate the disaster medicine training and exercises and the unification of command and control systems in the event of a disaster (Fig. 3).

A specific example of funding is the mobile disaster mortuary facility which was purchased by the federal government when Hurricane Katrina hit New Orleans. Approximately 50 million dollars was invested, and the facilities can be used anywhere inside and outside of the state of Louisiana. A local government would hesitate spending a great amount of money on a facility

with a low frequency of use, but having access to a national government-owned asset should be considered.

It should be noted that local physicians and members of medical teams dispatched from outside the affected area collaborate and respond with commitment to the cause. This is exactly the support provided in the medical surge during the Great East Japan Earthquake and thought to be the most important feature in disaster medical care.

ICS Command and Management System

In the United States, there is a standardized management system called the Incident Command System (ICS) that delineates the chain of command authority delegation rules, and coordination methods at the time of disasters. The ICS makes cooperation between different organizations easy and minimizes confusion and mistakes. In recent years, its use has been spreading to non-government areas as well and highly evaluated.

To build a collaborative system that can smoothly manage and operate the system of systems, the line of command and coordination needs to be clarified and all members involved

in disaster medical care should understand the ICS well.

What is unique in the US disaster medical system is that the coordinating agency, FEMA, deliberates the responses of the federal government and as the overall coordinator provides various types of assistance through local offices, while collaborating with federal ministries. Since the funding flows through FEMA, one cannot receive financial backup unless one cooperated with FEMA. So, the key drivers for success is this funding mechanism. A consistent and targeted funding is considered successful.

There is a mountain of other issues to consider as well, such as stockpiling and identifying a robust logistic systems of pharmaceuticals, overall training and exercises to obtain the commitment of members involved in disaster medical care. What is missing in the majority of time is the ability to paint your picture of what success looks like. Each member whether government, the private sector, or the medical association, needs to identify what success looks like in advance of the incident.

What is required of disaster medical care is to develop and implement plans while clarifying issues that need to be solved in order to reach that level of success imagined as the goal, thereby establishing preparedness.

Lecture 4

Introduction of Healthcare Ready's Case Studies for Social Contribution in the U.S.*¹

JMAJ 59(1): 38-40, 2016

Nicolette A. LOUISSAINT¹



Healthcare Ready Was Founded through the Needs of Interconnected Private and Public Sectors

When Hurricane Katrina struck the southeastern United States in August 2005, there were very big problems regarding response to the disaster, such as poor communication between the government and the private sector, conflicting information due to this lack of coordination, and delays in correspondence. In the US healthcare system, 92% of which is owned by the private sector, it is especially important that the private sector, which provides healthcare services, and the government are interconnected in order to promote disaster measures and build community resiliency.

Healthcare Ready (formerly Rx Response) was established in the aftermath of Katrina as a non-governmental organization (NGO) with members such as the Pharmaceutical Research and Manufacturers of America (PhRMA), the Healthcare Distribution Management Association (HDMA), the pharmaceutical supply chain, the American Red Cross, and biotech related organizations. Our activities began with the mission of strengthening collaboration with government, nonprofit and medical supply chains to build and enhance the community resiliency before, during and after disasters by addressing all non-cyber emergencies.

Goals of Healthcare Ready

One of our priorities is to build good relation-

ships between the public and private sectors at times of normal operations. We work very hard to make sure that strong cooperative relationships and information-sharing foundation are established in advance of disasters. We believe that enforcing this will enable smooth response due to speedy communication and pertinent information flow.

Additionally, we emphasize activities that support health and economic recovery so that for the residents of affected areas, the quality of life (QOL) returns to normal as fast as possible after a disaster occurs. Disaster healthcare tends to focus on short-term response such as emergency and critical care, but from the view of building resiliency in the community, it requires a long-term perspective. For this reason, Healthcare Ready's mission will continue until the community is completely rebuilt. This is what we have learned from the experience of a region that has not fully recovered 10 years after the Hurricane Katrina disaster.

Continuity of Care in the Lifecycle of Healthcare Delivery in a Disaster

The three R's in the lifecycle of healthcare delivery are Response, Recovery, and Resilience (Fig. 1). Healthcare Ready's activities begin with Response. At this stage, the priority is to focus especially on areas such as access to the affected area, provision of fuel and electricity, and sharing information. Next, in Recovery, through coordination and long-term planning between the public and private sectors, economic recovery is

*¹ This article is a translation of the presentation published in the Report of the JMA-PhRMA Joint Symposium held in Tokyo, Japan, on November 18, 2015.

¹ Director of Programming, Healthcare Ready, USA (nlouissaint@healthcareready.org).



Fig. 1



Fig. 2

supported while focusing on awareness activities to share what was learned in past disaster experiences in preparation for the next disaster. Finally, at the Resiliency stage, evacuation drills are planned and implemented, best practice is promoted, policies are drawn, and a wide range of activities aimed at enhancing healthcare services carried out.

A specific example of our initiatives is the Rx Open that can be found on our website that includes contents for information sharing. Using Google maps as an overlay, it indicates pharmacies that are currently open or closed, or if the operating status is unknown, and their locations. This information is updated every few hours. The main purpose is to provide information regarding nearby pharmacies to residents in disaster-affected areas, but it also functions as a useful tool for the government to check the current status of the affected areas. Rx Open presently covers more than 90% of pharmacies across the United States. We believe that this type of information sharing is made possible as a result of collaboration with the pharmaceutical companies and pharmacies before a disaster strikes.

Since 2002, Healthcare Ready has experienced disaster response in 55 cases across the United States. The disasters are explained in Fig. 2. With the exception of infectious diseases that accounted for 5%, they were all natural disasters including those considered to be possibly related to abnormal weather. However, as it is impossible to predict the type of disasters that might strike in the next ten years, the priority of the type of response will likely change according to

each situation.

Of the many activities we have experienced so far, one of the largest was responding to Hurricane Sandy that struck the eastern United States in 2012. Being the only private sector group that was invited to represent on the Critical Coordination calls by the Department of Health and Human Services (HHS), Healthcare Ready acted as coordinator regarding the procurement and supply of medicine, medical equipment, and donations.

Issues Regarding the US Healthcare System and Disaster Response

Laws and policies related to the US healthcare are quite complex because they are individually set by the federal government, state governments, and local governments. Although federal and state governments respond to disasters as well, it is the local government that must understand the situation of the affected areas and identify the needs. In addition, law enforcement agencies and the private sector also become involved, but they are not necessarily disaster healthcare professionals, which would make it difficult for them to specifically respond to the medical needs of the affected areas.

Other areas of concern in disaster response are: Healthcare access to disaster areas that require medical care; Patient adherence support; Public health and pharmacy collaboration; Medical history and records sharing; Insurance disaster challenges; and License transfers during emergencies. Solutions must be found for each

Drawing Parallels: U.S. lessons learned

- The model works for an “all-hazards” approach
 - Engage the private sector industries
 - Function as a bridge between the public and private sector
 - Enhance relationship-building in peace time
 - Be prepared to activate in the case of disaster
- We have learned lessons that will apply to every country’s healthcare system

HEALTHCARE READY 3

Fig. 3

area, respectively. For example, in the field of pharmacy collaboration, if the pharmacist with a pharmaceutical license from a different state wishes to offer assistance during a disaster, can he or she do so? If so, how? The extent of medical practice allowed by a pharmacist in the event of a disaster needs to be deliberated before a disaster occurs. In the US, professional qualifications are managed by the state and local jurisdictions. As such, there is no standardized framework in place for private organizations and personnel who are very much needed and the process before responding to a disaster becomes fragmented and inconsistent. However, the private sector already fully understands the importance of enhancing public and private collaboration regarding disaster response and wants the states and localities to adopt a unified framework that

is consistent.

Right now we are putting together white papers with suggested improvements for the existing disaster response program and are actively lobbying influential policy makers so that they understand the situation. The private sector needs to take the lead in reforming future disaster healthcare and our role is to find solutions and make new proposals to build nationwide cooperation beyond the boundaries of the sectors.

Transmitting Lessons That We Learned in the US to the World

The Healthcare Ready model is one that works for an “all hazards” approach, engaging private sector industries and functioning as a bridge between the public and private sector. At the same time, it enhances relationship building in peace time in order to act quickly during a disaster. These efforts have led us to success (**Fig. 3**).

This approach applies not only to disaster response within the US but will apply to communities in other countries and other medical sectors, in different types of disasters. Healthcare Ready has responded to several crises through assistance such as transporting residents and supplying medicine during international disasters, including the eruption of Icelandic volcanoes in 2010, earthquake in Haiti, and the Great East Japan Earthquake, and hope to further contribute to the development of disaster healthcare at home and abroad.

Panel Discussion*1



Moderators: Masami Ishii, MD, *At that time Executive Board Member, JMA*
Ichiro Ono, *Deputy Representative/Director, Policy and Public Advocacy, PhRMA Japan*

Panelists: Shigeru Ogisawa, *Director for Disaster Response Operations Division, Disaster Management Bureau, Cabinet Office*
Haruhiko Hakuno, MD, *The Team Leader, Emergency and Perinatal Medical Care Team, Regional Medical Care Planning Section, Health Policy Bureau, MHLW*
Ken Burris, *Former COO at FEMA*
Nicolette A. Louissaint, MD, *Director of Programming of Healthcare Ready*

The Importance of “Coordination” in Disaster Response Systems

[Ishii] It has now been five years since the Great East Japan Earthquake but we are still in the midst of reconstruction. Through today’s symposium we were able to see many issues. The framework presented by Mr. Ogata of the Cabinet Office in Section One is likely the basis of Japan’s disaster response. However, after seeing the US example of collaboration between the FEMA and non-profit organization Healthcare Ready, I felt that implementing a similar effective approach in Japan would pro-



vide further enhancement. In the future of our disaster response systems, what specifically should we take into consideration? I would like to ask your opinion on this.

[Burris] Through the many years that I have been involved in disaster, I have experienced great number of struggles. FEMA is a central organization responsible for the overall coordination of the federal government, so complex factors such as politics and power get tangled up, resulting in many tricky aspects. That is precisely why it is necessary to create a disaster response system. I believe that the key to success is not “command” but rather “coordi-



*1 This article is a translation of the panel discussion in the Report of the JMA-PhRMA Joint Symposium held in Tokyo, Japan, on November 18, 2015.

nate.” You cannot effectively move things simply by command, so coordination need to be made. The end result depends on how to coordinate within the system.

In the United States, authority is given to the nation. This ripples through the region with different levels of authority and is very complex. During the Hurricane Katrina disaster, the authority was given to the mayor of New Orleans or the Governor of Louisiana. The national government had not authority to order evacuation. Because of that, residents in the disaster areas were not given the order to evacuate in a timely manner. That is why I think it is most important that coordination is made to governmental authority at each level for the disaster response system to function effectively and efficiently.

[Louissaint] To me the next step would be identifying the non-governmental actors that need to be engaged with the systems that government is setting up. Understanding who are the individuals, the physicians, and then also the systems and organizations. They need to be the part of the systems. How do you figure out ways to coordinate independently, and then coordinate with the system? That is a big part of the lesson we learned after Hurricane Katrina. How those non-governmental actors incentivize coordination and then coordinate with the government during the Great East Japan Earthquake, the strong initiative taken by the Japan Medical Association (JMA), raising great achievements through cooperation between many medical institutions and physicians was highly commendable and provides a good example of disaster response for other countries.

[Ishii] Thank you. I think that when it comes to disaster medical care, we at the JMA have many common aims and activities with Healthcare Ready in the US.

Responding to Needs of Various Languages and Vulnerable People

[Ishii] How is multilingualism dealt with during a disaster in the US?

[Burriss] At FEMA we have system that can respond to multilingual needs with the cooperation of disaster assistance personnel who are native speakers. These language groups can be

considered the DMAT of languages. If someone in the disaster area needs to communicate in a language other than English, a staff member who speaks that language will provide support by going to that area.

[Ishii] One of the issues in Japan is the lack of medical interpreters. We are expecting over 20 million visitors from other countries during the 2020 Olympic and Paralympic Games in Tokyo and multilingualism is a major concern in various situations.

[Burriss] Most of those coming to Japan for the Olympics are likely young people who are quite literate in the use of mobile devices. As long as they can access the Internet, they should be able to easily communicate by using the interpreting functions provided. However, in the case of a disaster, it is possible that Internet access will become difficult, so you will absolutely need the direct support of people who can interpret between Japanese and a foreign language.

[Ishii] How about disaster response to people who use medical equipment at home such as for oxygen therapy, or those who need dialysis, or the elderly? How is help offered in the US?

[Burriss] Even if an individual needs special medical support, if the information is not communicated and shared properly, it is difficult to respond during a disaster. For many years, we had trouble responding to those who needed electricity to use medical equipment at home. With the introduction of the registry however, we are now able to respond smoothly. Having said that, this sort of response involves the handling of personal information, so it is preferable to intervene through the private sector such as Healthcare Ready, or local jurisdictions, rather than the federal government.

[Louissaint] Many of the disaster vulnerable populations include those who are undergoing dialysis, admitted to nursing homes, and others who need psychiatric support because of PTSD. At Healthcare Ready, we work hard to focus on what their needs are so that we can help them. In the US, there are individual plans at dialysis centers or facilities for the elderly, with detailed instructions for the type of response needed or evacuation. It depends on the facility, but for example there are plans that can resume dialysis services or nursing care services within 36 hours. The system provides smooth coordination with large regional centers such as fire departments

and welfare institutions.

What Is Your Image of Success in Japan?

[Ono] Mr. Burris's slide showed us the picture of color pallet and asked us to have the imagine of success of disaster medical care in our own way. In the end, of course we will do whatever we possibly can, but it is realistically impossible to end up with zero deaths after the occurrence of a big earthquake. In Japan today, what should be our image of success when we think about disaster response?



[Ogisawa] For example, the estimated casualties from collapsed buildings and big fires in the event of a Tokyo Inland Earthquake is approximately 23,000. My image of success would be to greatly reduce damage by constructing earthquake resistant buildings, prevention of fires, and controlling the outbreak of electrical fires by installing seismic breakers. Also, especially in the Nankai Trough Earthquake when we are expecting a tsunami that will result in tremendous damages, I think it is possible to prevent a considerable amount of damage by evacuating in advance. Of course emergency measures after the earthquake will also be important, but as a factor for success, preparedness would account for nearly 90%.



[Hakuno] As the Ministry of Health, Labour and Welfare (MHLW), we are focused on how to provide medical care after the occurrence of a disaster. As you know, after 72 hours from the onset of a disaster, the survival rate drops drastically. Our image of success is to put our collective efforts into connecting to medical care within that time. In order to do that, we must respond by dispatching DMATs immediately and safely transport disaster victims to a place where they can receive the medical care they need. I believe that these are our most important activities.



Controlling Infectious Diseases during a Disaster.

[Ishii] In the Great East Japan Earthquake, collaboration between local medical associations

and government-run health centers were able to contain the spread of infectious diseases at a minimum. I believe that collaboration between government agencies and institutions such as the Japan Pharmaceutical Manufacturers Association are essential for controlling infectious diseases. What preparations are necessary?

[Ogisawa] Infectious disease control during a disaster requires the interdisciplinary cooperation of the MHLW, the police, fire department, Self Defense Forces, municipalities and even Ministry of Economy Trade and Industry, regarding procurement of pharmaceuticals, transport, manufacturing bases and distribution channels. It is necessary to check the flow of logistics related to securing and providing medicines for infectious diseases from before a disaster strikes and prepare a system so that the relevant ministries and agencies can be smoothly coordinated. This is not easy, but we must take advantage of the lessons of the Great East Japan Earthquake and proceed in an organized manner.

[Ishii] To more effectively control infectious diseases, it is important that we healthcare providers also provide the government with feedback as quickly as possible regarding the status of medical supplies to lead to the next action.

[Hakuno] Stockpiling and distribution is a big problem especially with drugs for new flu countermeasures. However, a direction towards a solution is illustrated in the guidelines. Moreover, each prefecture has started drawing more concrete plans. There are still many issues remaining, so I think we need to carefully understand those and continue deliberations.

[Ishii] Dr. Louissaint, based on your experience in responding to the Ebola hemorrhagic fever, what are your thoughts on infectious disease control?

[Louissaint] During the Ebola hemorrhagic fever outbreak in 2014, I was with the US Department of State. It was hard because while providing international response to the local residents of West Africa, we needed to strengthen measures in the US. Also, unlike influenza, there is no vaccine for the Ebola hemorrhagic fever. While therapeutic agents had been developed, rest and hydration was actually the standard treatment. As you know, since the infectivity and lethality was so high, control by putting infected people into isolation facilities, burying the dead, and preventive clothing for medical staff (PPE:

Personal Protective Equipment) were major challenges.

The lesson we learned from responding to Ebola and other pandemics is that as infection spreads among the local residents, there is less contact with the outside, making communication and access to information difficult. To prepare for this, it is necessary to install an environment of communication with telephones, FAX machines and data communication. In infectious disease control, transmitting and sharing information is just as important as having a health-

care system and needs to be taken into account.

[Ishii] Through this discussion, regarding the many issues underlying disaster response and infectious disease control, I am reminded of the importance of how each person in every position needs to make their own considerations and to continually share the latest information, beyond the borders of organizations or nations. For the future development of disaster medical care I hope that we continue to hold opportunities for this type of learning. Thank you very much.

Closing Remarks

Tony ALVAREZ
*Chairman of the Japan-Based Executive Committee of the
Pharmaceutical Research and Manufacturers of America (PhRMA)*¹



As chairman of the Japan-Based Executive Committee of PhRMA, I am very pleased to have been able to participate in the 3rd PhRMA-JMA Joint Symposium 2015. Members of both PhRMA and the Japan Medical Association share the role of contributing the highest of medical care, the importance of which is especially highlighted in the event of a disaster. The theme this time, “Searching for the Ideal Medical Scheme at the Time of Urgent Disasters in Japan and the US” was extremely timely. While disaster preparedness in Japan and the US has many differing aspects, there are many similarities. I believe that the discussion on the topic, Best Practice, will be highly beneficial in improving the capacity of support during disasters in the future.

Finally, I would like to express my sincere thanks to the doctors and executives who gave us lectures. Mr. Ken Burris is the leading authority who has dedicated his entire career to disaster preparedness and emergency medical care. Dr. Nicolette A. Louissaint is also an expert who is well known in this field in the United States.

Meanwhile, Dr. Masami Ishii takes on a leading position in this significant field in Japan. Mr. Toshinori Ogata, Deputy Director-General for Disaster Management Bureau, Cabinet Office and Dr. Haruhiko Hakuno, MHLW Emergency and Perinatal Medical Care Team Leader, spoke on the government’s position in making every effort to tackle and resolve the threats that are caused by disasters, and actual examples of programs modulated by the national government.

During this symposium, we were given the opportunity to discuss the important theme of disaster medical care, something that greatly impacts the Japanese people and society. I would like to once again thank Dr. Yoshitake Yokokura for his leadership in various aspects of public health not limited to this important field, and to Dr. Masami Ishii for his wonderful job as a moderator.

¹ Chairman of JBEC from February 12th, 2014 to December 31st, 2015.

Japan Medical Association Junior Doctors Network Report on the WMA General Assembly, Moscow, 2015

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Tomomi KISHI,¹ Chiaki MISHIMA,² Kazuhiro ABE³

Introduction

The Junior Doctors Network (JDN), approved by the World Medical Association (WMA) in 2010, is an international network of junior doctors. The Japan Medical Association Junior Doctors Network (JMA-JDN) was established as the national JDN in Japan in 2012 under the JMA Global Health Committee and started its activities as a member of the WMA-JDN in 2013. This is the report of the 3 JMA-JDN members who participated in the 2-day JDN Conference held on October 12 and 13 preced-

ing the 2015 WMA General Assembly in Moscow.

More than 30 junior doctors from 17 countries—Japan, South Korea, Myanmar, the Philippines, the United States, Canada, Peru, Brazil, Turkey, Greece, Portugal, Spain, Germany, Macedonia, Kuwait, Nigeria, and South Africa—gathered at this year's JDN Conference. Three members from Japan—Abe, Mishima, and Kishi—attended the conference. The 2-day conference included activity reports by each country, proposals for policy statements, and a board member election, and we received encourage-



WMA President Dr. Hoven and JDN members from various countries

¹ Japan Medical Association Junior Doctors Network, Tokyo, Japan (kishi1122@gmail.com).

² Japan Medical Association Junior Doctors Network, Tokyo, Japan (chiakimishima@gmail.com).

³ Chair, Japan Medical Association Junior Doctors Network, Tokyo, Japan (Kazuhiro_abe_1215@ybb.ne.jp).

ment and lectures from the WMA leaders.

Policy Statements Proposed by the JDN

Our report begins with the policy statement proposals. Proposing policy statements to the WMA is one of the JDN's most important tasks. JDN members discuss various policies and propose them to the WMA Council for final review. In particular, physicians' well-being is a key topic that the JDN has been working on since its launch in 2010. Physicians, who are in the position of providing care for patients, often ignore their own health. Medical students and junior doctors who rotate among different departments are especially prone to suffering from depression because their interpersonal relationships and work hours frequently change. Overwork is also a major problem; in Greece, where the national economy is in crisis, as well as in South Korea, there are junior doctors who reportedly are unable to go home for days. Even in European countries where work hours are limited by law, the system apparently is not functioning in areas that have a shortage of physicians. Harassment prevention, swift support for physicians who are ill, and privacy protection will play important roles in maintaining the health of junior doctors. The JDN recently finalized a policy statement consisting of 12 items pertaining to physicians' well-being, and the statement was resolved by the WMA Council.¹

Other topics in which the JDN has been involved recently include smallpox, the elimination of nuclear weapons, and climate change. The issue of climate change will likely become a key topic in the future. The United Nations adopted the Sustainable Development Goals (SDGs) in August 2015, which include the need for urgent measures to address climate change and accessibility to sustainable energy by all people. The Millennium Development Goals (MDGs) will expire at the end of 2015 and be replaced by the SDGs, allowing medical professionals to shape what we can do for the SDGs. The WMA continues to expect the JDN to take a proactive role in policy proposals. The JMA-JDN shall actively speak out at the JDN meetings while improving the language proficiency for debates and learning about policy proposals.

Social Exchanges with Other Countries

Social exchanges with junior doctors of other countries are one of the most enjoyable aspects of the JDN. The JMA-JDN particularly emphasizes exchanges with JDN members of our neighboring nation, South Korea. During the WMA General Assembly sessions in Moscow, we had a discussion with the chair and vice-chair of the Korean Association of Public Health Doctors (KAPHD) and agreed to hold the Japan-Korea JDN exchange project in January 2016. We are also making progress on our unique project to accept trainees for simple, short-term training in Japan. The JDN has been considering an exchange program, and its pilot program is finally going to begin. It is likely that issues such as proof of study and insurance will be entrusted to the Educational Commission for Foreign Medical Graduates (ECFMG). We have a lot to expect from these programs.

A Country Presentation session was also held during the JDN Conference. This session involved presentations about the activities and developments of the participating national JDNs and was one of the liveliest aspects of the conference. For example, Myanmar, in which democratization is progress, introduced the "black ribbon movement," a nonviolent resistance campaign in which medical professionals who fear the militarization of the health ministry show their objection by wearing black ribbons. Photos of smiling physicians and medical students in white coats wearing black ribbons were shown



From left: Kishi, Abe, and Mishima of JMA-JDN, and Dr. Murt, Chair of JDN (Turkey)

to the audience. The report from Peru, meanwhile, was a shocking one. Medical professionals in Peru are obliged to complete 1 year of medical service in a remote area, and the work environment to which some are sent can be quite rigorous—for example, the only medical device available is a manometer, or it takes 10 hours to reach the nearest secondary-care facility on foot, or there is no phone, so a dispatched junior doctor cannot consult a senior physician about treatment methods. Some physicians in training develop mental health problems from cultural and/or language differences, and some become victims of violence from local residents. Every year, about 10 junior doctors in Peru are forced to suspend their term of service, and in some extreme cases, doctors go missing or die. This story renewed our awareness that the work environment and well-being of junior doctors are important issues in any nation.

Representing Japan, the JMA-JDN presented developments of the past 3 years and introduced JMA-JDN seminars, Japan-Korea exchanges, and our plan for a study-abroad program. To our delight, Japan won first place in the vote to determine the most excellent presentation. Learning about the efforts of other countries gave us a good opportunity to evaluate our activities in Japan in relation to theirs and to consider what initiatives we junior doctors are expected to take.

Conclusion

This report has provided a brief overview of the

JDN Conference at the WMA General Assembly in Moscow. This was the fourth time for Abe and Mishima, who participated in the 2013 Fortaleza General Assembly, the 2014 Tokyo Council, and the 2014 Durban General Assembly, joined the JDN Conference. The election for 2015/2016 JDN board members was also held, and Mishima of JMA-JDN was elected to be in charge of membership. This is a sign of the friendship and trust JMA-JDN has nurtured with the national JDNs worldwide.

The next WMA General Assembly will be held in Taiwan in October 2016. The JMA-JDN shall strengthen the network of junior doctors in Asia and Pacific region even further with the upcoming Taiwan General Assembly in mind.

Acknowledgments

We express our sincere gratitude to Dr. Yokokura, President, Dr. Matsubara, Vice President, Dr. Ishii, Executive Board Member, and the staff of the International Affairs Division of the JMA for providing such a valuable opportunity and wonderful guidance.

Reference

1. World Medical Association. WMA Statement on Physicians Well-Being. 2015. <http://www.wma.net/en/30publications/10policies/p9/index.html>. Accessed December 2015.

Shoguns and Animals

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Hisashi TSURUOKA¹

Japan was a closed country from the 1630s to 1850s, maintaining its national seclusion policy for over 200 years. During this time, almost all international trading was limited to Nagasaki. In the roughly 250-year era called the Edo Period (1603-1867), the head of the samurai government was referred to as a “Shogun.” In other words, the highest authority of the samurai government (called *Bakufu*) overseeing state affairs who resided at the Edo castle, which is now the Imperial Palace of Tokyo, was a shogun.

The Edo shogunate, or Tokugawa shogunate, began with Ieyasu Tokugawa who became the first Tokugawa shogun in 1603, and ended with the 15th shogun Yoshinobu Tokugawa. In 1653 when the end of the Edo Period was drawing near, a squadron of 4 ships from the United States with Commodore Perry on board arrived in the Port of Uraga near Yokohama, demanding the Edo government to end the national isolation policy and open its ports to foreign countries. Japan entered a tempestuous time after this event, and consequently the Edo government returned its authority to the then emperor in Kyoto in 1867. This marked the end of samurai rule that had lasted for about 700 years since the Kamakura Period. This was also when Edo was renamed Tokyo, and Japan opened its door to the world and started down the path toward modernization.

During the Edo Period, various animals were brought into Japan via Nagasaki from abroad, such as an ostrich (1658), canaries (1709), a crocodile (1780), an orangutan (1792), a white bear^{*1} (1799), and a lion (1865). Many of these animals were imported by foreign monarchs to be presented to a shogun.

A shogun who was fanatical about animal protection

In 1680, Tsunayoshi Tokugawa assumed the fifth shogunate and took charge of state affairs (Fig. 1). Tsunayoshi achieved considerable success as a shogun in terms of promoting agricultural administration, academic development, and in politics.

However, this shogun is most popular for issuing a series of civil/penal codes on animal protection from 1687 until 1709, which are collectively called the *Orders on Compassion for Living Things*. These animal welfare laws, which are so eccentric and unparalleled in world history, even allowed capital punishment for those who abused animals. They are considered evil laws that brought suffering to the public.

The main contents of the codes issued in 1687 when Tsunayoshi became a shogun are as follows.



Fig. 1 Tsunayoshi Tokugawa
(Courtesy of Hase Temple in Nara, Japan)

¹ Advisor to the International Affairs Division, Japan Medical Association, Tokyo, Japan (tsuruoka@po.med.or.jp).

^{*1} This could be a polar bear or an albino brown bear (identification unknown).

- When an abandoned child is found, someone in the vicinity should first take care of the child, and nurture the child or put the child up for adoption if someone is willing to adopt the child; do not immediately report to the authorities.
- When animals including birds appeared to have been hurt by humans are found, this should be reported to the authorities as before. There is no need to report a case of cannibalism or self-mutilation. They should be nurtured and returned to their owner if there is any.
- It is reportedly a common practice for people not to feed dogs with no owners because people assume that feeding them will make the person responsible for them as their pseudo-owner and could get the person into trouble. Such an act (of not feeding and therefore starving those animals) cannot be allowed, and one must ensure it will not happen in the future.
- A dog owner apparently reports the death of his/her animal to their superior. There is no such need from now on, unless there is an abnormality in the animal's death.
- It is important for humans to have compassion arising from a heart of mercy, not just for dogs but for all living things.

The text above shows that people commonly reported a case of an abandoned child to the authorities first to avoid getting involved, but Tsunayoshi ordered that priority be assigned to caring for an abandoned child to prevent starvation rather than filling out a report. This suggests that his *Orders on Compassion for Living Things* were intended not only to protect animals but also vulnerable humans.

Tsunayoshi continued to add more civil/penal codes one after another. For example, a weight limit for loads was set for working horses, having singing insects such as long-horned grasshoppers or pine crickets as pets was banned, and eventually the maximum sentence for animal abuse became capital punishment. Some examples of those who were punished under these civil/penal codes are as follows.

- A man who deserted a sick horse was exiled to a remote island.
- A public officer who threw a stone at a dove was exiled to a remote island.
- A villager who cut down a tree with a bird nest was punished.
- Local residents were forcibly evicted to make

space to build a large kennel facility.

- On the charge of being involved in a business of killing birds with firearms and selling them, 10 samurai-rank people including a constable of Osaka were ordered to commit suicide by *harakiri* and one received a death sentence.
- The announcement was made to award 30 *ryo* (roughly equivalent of \$30,000 USD today) for an informant on dog-killing.

Tsunayoshi particularly cherished dogs, as he was born in the year of the dog according to the Chinese zodiac calendar. During Tsunayoshi's rule, dog owners were punished if their dogs were injured. Many people deserted their dogs in fear of getting into trouble. In order to rescue these dogs, the Tokugawa government built 5 large-scale kennels in Edo to house and nurture stray dogs. Reportedly, the kennels occupied 93 hectares in total, and the total construction and annual feeding cost reached 170 million USD in today's currency to house 100,000 dogs; some records suggests as many as 200,000 dogs. The kennels received a benefit for each dog, commonly called the *Oinu-sama* (Mr. [or Sir] Dogs), in the amount equivalent to a man's salary, and the local towns were forced to partially cover the cost. When even that was insufficient to house all dogs, some farmers were designated as the *Oinu-sama* Staff to care for dogs at their homes. Naturally, the total cost of caring for dogs including their food exponentially increased, reaching as much as \$5 billion USD in today's currency, putting pressure on the Tokugawa government's finances.

The Tokugawa government called deserted



Fig. 2 Dog statues built to mark the area where kennels for stray dogs existed during the Edo Period
(Near the front gate of the Nakano City Hall, Tokyo)

or stray dogs “traveling dogs.” A fenced facility with kennels (called *Okakoi-ba*) to care for those traveling dogs emerged in the western area of Edo called Nakano village, which presumably housed about 100,000 dogs (Fig. 2). Increasing numbers of deserted dogs became a social problem, and they were transferred to those fenced kennels. Reportedly, the installation of such fenced kennels was based on one of the civil/penal codes contained in the *Orders on Compassion for Living Things*, and even registers for dogs were created in those years.

The Orders, however, were abolished by Tsunayoshi’s successor immediately after Tsunayoshi passed away. The fenced kennels were also abolished, but no record clearly states the fate of the housed dogs. On the other hand, there is a record of some kennel managers who spent 48 years to pay back the money they were provided to care for the dogs.

As eccentric as these Orders may be, it should be noted that a law on animal welfare already existed in Japan in the 17th century, when no other nation in the world implemented animal protection as such legal measures.

The shogun who ordered elephants from abroad

In 1716, the eighth shogun, Yoshimune Tokugawa, assumed the regime (Fig. 3). He was devoted to restoring the shogunate power, and implemented various projects such as government reforms through increased taxation and cost-cutting, pub-

lic administration including reclaiming land to expand farmlands, enacting statutes for civil/penal codes (*Kujigata Osadame-gaki*), and installing a comment box from the public (*meyasu-bako*) to collect public opinions. These efforts later earned him the title of “the restorer of the Edo government.”

Yoshimune allegedly had an enterprising and daring character and showed strong interest in things from overseas. Exotic rarities including animals and plants were imported to Nagasaki, which is located at the west end of Kyushu in the Japanese archipelago and was virtually the only contact point for international trading at the time. Merchants in Nagasaki would draw images of those rarities to take orders from the Tokugawa government. In 1728, in the 12th year of his reign, Yoshimune ordered the import of elephants. Some say that elephants were to satisfy his curiosity, while others say it was part of his efforts toward industrial development. In accordance with his order, 2 elephants were imported from Vietnam to Nagasaki by the merchant of Qing (China) (Fig. 4). This was a pair of elephants, but the female died in Nagasaki soon after arriving.

Live elephants had previously been to Japan; indeed, it was the fifth time that live elephants were brought over. The first one arrived in 1408 on a ship from Portugal (or Spain). One elephant, 2 pairs of peacocks, and a few other animals were offered to the samurai government of the time. The second arrival was in 1575, when a



Fig. 3 Yoshimune Tokugawa
(Courtesy of Hase Temple in Nara, Japan)



Fig. 4 The male elephant that was imported from Vietnam in 1728

ship from Ming (China) arrived in the Port of Hakata in Kyushu with an elephant and tigers. The third elephant in 1597 was a gift from a Luzon governor to Hideyoshi Toyotomi, the then ruler of Japan. It arrived in Osaka to be presented to Hideyoshi, and it was also later presented to the emperor of the time and then to the people of Kyoto. The fourth elephant from Vietnam in 1602 was a gift to Ieyasu Tokugawa, along with a tiger and 2 peacocks. Finally, the fifth case involves the elephants of 1728.

The 7-year-old male elephant, which was still a juvenile, started the journey from Nagasaki to Edo (Tokyo) in March 1729, taking 2 months to reach Kyoto (about 600 km from Nagasaki). In Kyoto, it was presented to the emperor of the time. According to the records, the elephant walked on land but was carried on a ship to cross the straits along the way. The “Zo-shi (Record of the Elephant)” written in Edo describes its size: the head length was 81 cm, the nose length was 99 cm, the height of the back was 171 cm, the girth was 300 cm, and the torso length was 222 cm.

In those times, anyone who entered the palace to be seen by the emperor had to have a rank in the royal court. The elephant, which naturally lacked such a rank, was actually given a special court rank in haste so it could enter the palace and be seen by the emperor—quite an interesting historical episode. After Kyoto, the elephant arrived in Edo (Tokyo, about 400 km east) in May of the same year, marking the end of a 3-month journey of about 1,000 km (Fig. 5).



Fig. 5 Map of Japan
Locations of Nagasaki, Kyoto, and Edo (Tokyo)

Being welcomed by the Edo residents most enthusiastically, the elephant paraded the streets and was housed at the Hama-goten, a spacious property owned by the government that faced the ocean near the Edo castle. A few days later, Shogun Yoshimune summoned the elephant to the castle and met the animal in the front garden of the main hall room. The government continued caring for the elephant for over 10 years at the Hama-goten, and records show that Yoshimune enjoyed seeing the elephant occasionally at the castle.

The frequency of summoning the elephant then decreased, and finally the government announced that its patronage had been terminated. However, because no one was willing to take in the elephant, the animal was kept at the Hama-goten. Today, the daily requirement of an elephant diet consists of 10 kg of carrots, 0.6 kg of bread, 1 kg of onion, 100 kg of fresh grass, 25 kg of rice straws, 10 kg of hay, and 2 kg of herbivorous feed. We can only imagine the incredible cost of feeding this elephant in the Edo Period.

The Nakano village reappears in this story. The elephant was eventually handed over in 1741 to the chief of Nakano village, Uemon Horie, and a farmer, Gensuke, who had been carrying the animal's feed to the Hama-goten. By this time, the elephant was a fully grown adult. Gensuke built a pen for the elephant and started a show business using the elephant as the spectacle. He apparently made a lot of money taking advantage of this animal's rarity at that time, but things did not turn out the way he had hoped. The elephant died only a year later in 1742 at the age of 21, after becoming too weak from the cold and hunger. For an elephant, dying at 21 is very premature.

The government took custody of the dead elephant and kept its skin. The records indicate that Gensuke was given the skull, 2 tusks, and the trunk skin, which he reportedly used as show spectacles for a long time to earn money. Years later, when a monk at the Hosenji Temple in Nakano village heard about the elephant skull and tusks kept by Gensuke's offspring, the monk bought and stored them as the temple's unique treasure to lure visitors. However, except for a skull fragment, they were lost in a fire during World War II.

Summary

These 2 old tales both relate to animal handling. Although they have been passed down for over 300 years, it is likely that these stories represent the truth considering the records and documentation remaining today.

Recently, the World Medical Association and the World Veterinary Association have formed a partnership. Together, they are promoting the concept of “One Health,” which involves the close collaboration of human medicine and veterinary medicine as key to the successful control of infectious diseases and epidemics in the future.

Three-hundred years ago, the level of awareness of public health was low, and the level of technology in public health was marginal. If 100,000 stray dogs are collected in one place today, we will naturally become concerned about the spread of a zoonosis. Similarly, there is no way of telling what kind of disease could emerge among local people if an elephant walked down the same street as humans without the safeguard

of quarantine.

The first story is an extreme example of animal welfare. The second story also concerns animal dignity. Aiming for the successful joint collaboration of human medicine and veterinary medicine is one interpretation of the concept of One Health. However, we must never forget that the idea of One Health targets both humans and animals, and that the protection of human dignity and animal dignity lies at the very root of the idea.

That being said, I cannot help but wonder what happened to the great number of dogs after the reign of Shogun Tsunayoshi was over and those civil/penal codes were all banned in 1709, as described in the first story. And the elephant in the second story, having been removed from its homeland in Vietnam and spending 14 years in Japan as a show spectacle only to meet a premature death, certainly deserves a great deal of compassion, too.

Transitioning seasons

The changing of the seasons gradually progress through the year from the south to the north of the land of Japan, which consists of five main islands and about 7,000 medium- and small-sized islands stretching over 2,000 km. In spring time, the cherry blossoms start as early as February at the southernmost limit in the country and move toward the northernmost limit over three months. The local blooming season in any area is very short because the flowers last only for two weeks. Since the blooms are short-lived, it is customary for the people of Japan to gather around the cherry trees in full bloom with family members, coworkers, or friends during the so-called *hanami* [flower-watching] season and enjoy picnics and parties while indulging in the beauty of the flowers and appreciating the onset of spring. In May, the arrival of early summer with fresh verdure is refreshing, but it is followed by the humid and wet season called *tsuyu* that starts in June with many rainy days. The *tsuyu* ends from the west to the east in July, and the hot summer immediately engulfs Japan.

The fiscal year of the Japan Medical Association (JMA) begins at the end of June. Year 2016 is the election year of the JMA board, and President Yoshitake Yokokura has just started his third term with a new lineup of board members. A new board member has also been

appointed in charge of international affairs, and the circumstances surrounding the JMAJ are also set to change.

Since its first issue in 1958, the JMAJ has been playing the role of introducing Japanese healthcare to the world through the JMA's activities in English. Following the World Medical Journal, the JMAJ became an electronic journal in 2014.

Besides the JMAJ, other tools that the JMA has to introduce its activities include the JMA's English website, and the Facebook site focusing on international activities. Facebook has the advantage of reaching simultaneously and instantly; an activity can be posted with pictures on the very same day. Enhancing the English website would be the next challenge.

The methods of sending information, and the speed with which they can be sent, are fast growing and accelerating, with the amount of data that can be transmitted and received increasing day by day. Now that the JMAJ is an all-electronic journal, we, the editorial staff, will make all efforts to release each issue on time and endeavor to post information about the healthcare of Japan to people across the world.

Yuji NOTO, Manager, International Affairs Division, Japan Medical Association; Managing Editor, JMAJ (noto@po.med.or.jp).



Principles of Medical Ethics

Japan Medical Association

The mission of medical science and health care is to cure diseases, to maintain and promote the health of the people; and based on an awareness of the importance of this mission, the physician should serve society with a basic love for humanity.

1. The physician should strive to achieve a lifelong dedication to continuing education, to keep abreast of medical knowledge and technology, and to support its progress and development.
2. The physician should be aware of the dignity and responsibility of his/her occupation and strive to enhance his/her cultural refinement, education, and integrity.
3. The physician should respect the individuality of his/her patients, treat them with compassion, provide full explanations of all medical treatment, and endeavor to earn the trust of the patient.
4. The physician should maintain respect for his/her fellow physician, cooperate with medical care personnel and serve the cause of medical care to the best of his/her abilities.
5. The physician should respect the spirit of public service that characterizes health care, contribute to the development of society while abiding by legal standards and establishing legal order.
6. The physician will not engage in medical activities for profit-making motives.

