

JMAJ

Vol. 57 No. 3 May-June 2014

Japan
Medical
Association
Journal

JMA—President's Speech

Policy Address

JMA Policies

Guidelines for Iodine Prophylaxis as a Protective Measure: Information for Physicians

Enhancing International Contributions Centered on WMA Activities and Community Health

Efforts of the Japan Medical Association toward the Resolution of Vaccine Gaps

Regulatory Organizations for Physicians' Status and Administrative Sanctions on Physicians

—Examining the Framework of Government Administrative Systems for Physicians in Japan Based on a Questionnaire Survey Conducted on 13 National Medical Associations—

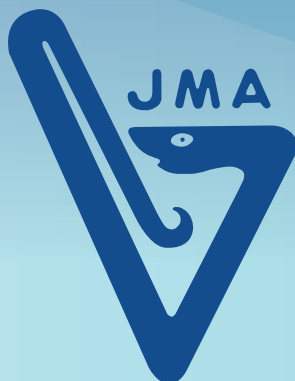
Research and Reviews

Health Literacy Training for Public Health Nurses in Fukushima: A Case-Study of Program Adaptation, Implementation and Evaluation

International Medical Community

Physicians and Professional Autonomy

From the Editor's Desk



JAPAN MEDICAL ASSOCIATION

JMAJ

EDITORIAL STAFF

Editor in Chief: Masami ISHII, MD

Managing Editor: Yuji NOTO

Senior Editors:

Hisashi TSURUOKA Mieko HAMAMOTO

Associate Editors:

Kazue IGARASHI

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/

ADVISORY MEMBERS

Yoshitake YOKOKURA, MD, President, Japan Medical Association (Chair)

Kenji MATSUBARA, MD, Vice-President, Japan Medical Association

Norio HIGUCHI, Professor of Law, University of Tokyo

Masamine JIMBA, MD, Professor, Graduate School of Medicine, University of Tokyo

Tatsuo KUROYANAGI, PhD, Lawyer and Legal Advisor, Japan Medical Association

Eiji MARUI, PhD, Professor, University of Human Arts and Sciences

Fumimaro TAKAKU, MD, President, Japanese Association of Medical Sciences

Keizo TAKEMI, Member of the House of Councilors

INTERNATIONAL COLLABORATORS

Margaret MUNGHERERA, MD, President, World Medical Association

K. VIJAYA KUMAR, MD, President, Confederation of Medical Associations in Asia and Oceania

Otmar KLOIBER, MD, Secretary General, World Medical Association

Tai Joon MOON, MD, President Emeritus, Korean Medical Association

Michael R. REICH, PhD, Professor, International Health, Harvard School of Public Health

Cecil B. WILSON, MD, Immediate Past President, World Medical Association

Eitaka TSUBOI, MD, Former President, World Medical Association

Wonchat SUBHACHATURAS, MD, Former President, World Medical Association

John R. WILLIAMS, PhD, Adjunct Professor, Department of Medicine, University of Ottawa

JMA GLOBAL HEALTH COMMITTEE

Akira AKAGAMI, MD

Sho HASHIMOTO, MD

Masayuki HATAE, MD

Shigehito ISHIGURO, MD

Masamine JIMBA, MD

Tsutomu KIKUCHI, MD

Naoki KONDO, MD

Yoshihiko KUBOTA, MD

Hideaki KURAMASU, MD

Takashi NAGATA, MD

Yasuhide NAKAMURA, MD

Shigeru SUGANAMI, MD

Keiji TAKEMURA, MD

Taro YAMAMOTO, MD

JMA OFFICERS

President: Yoshitake YOKOKURA, MD

Vice-Presidents:

Toshio NAKAGAWA, MD

Satoshi IMAMURA, MD

Kenji MATSUBARA, MD

Board Members:

Kiyoshi NAGASE, MD

Toshiaki HAKUI, MD

Shigetaka AOKI, MD

Hiroshi NONAKA, MD

Yoshinobu OKUBO, MD

Masaru SAITO, MD

Masataka INAKURA, MD

Syu KAWASHIMA, MD

Shigeru FUKUDA, MD

Hiroaki TERASHITA, MD

Mitsuaki MASEKI, MD

Yoshihisa TSUKADA, MD

Executive Board Members:

Sadaomi IMAMURA, MD

Masami ISHII, MD

Yukitoshi HANASHI, MD

Norihisa TAKASUGI, MD

Takashi KOMORI, MD

Hiroshi ISHIKAWA, MD

Kenji FUJIKAWA, MD

Kunihiko SUZUKI, MD

Mari MICHINAGA, MD

Auditors:

Ryuichi KAWASHIMA, MD

Nobuhiro KUZUO, MD

Haruo OZAKI, MD

The magazine is published bimonthly. Unless specifically stipulated, the views and opinions expressed in the papers do not necessarily reflect those of the JMA.

Copyright © 2014 Japan Medical Association

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher.

ISSN 1346-8650

Printed by Japan Printing Co., Ltd.

JMA—President’s Speech

Policy Address

Yoshitake YOKOKURA..... 109

JMA Policies

Guidelines for Iodine Prophylaxis as a Protective Measure: Information for Physicians

Sumito YOSHIDA, Mayo OJINO, Takayoshi OZAKI, Takushi HATANAKA, Kaori NOMURA, Masami ISHII, Kazuaki KORIYAMA, Makoto AKASHI..... 113

Enhancing International Contributions Centered on WMA Activities and Community Health

JMA Global Health Committee..... 124

Efforts of the Japan Medical Association toward the Resolution of Vaccine Gaps

Takashi KOMORI..... 135

Regulatory Organizations for Physicians’ Status and Administrative Sanctions on Physicians

—Examining the Framework of Government Administrative Systems for Physicians in Japan Based on a Questionnaire Survey Conducted on 13 National Medical Associations—

Yasuhiko MORIOKA, Norio HIGUCHI, Tatsuo KUROYANAGI, Jiro NUDESHIMA 139

Research and Reviews

Health Literacy Training for Public Health Nurses in Fukushima: A Case-Study of Program Adaptation, Implementation and Evaluation

Aya GOTO, Rima E. RUDD, Alden Yuanhong LAI, Hiromi YOSHIDA-KOMIYA..... 146

International Medical Community

Physicians and Professional Autonomy

Kazuo TEZUKA 154

From the Editor’s Desk

Masami ISHII 159

Policy Address*¹

JMAJ 57(3): 109-112, 2014

Yoshitake YOKOKURA¹

In these past two years, with the slogans of continuity and reform and from the community to the nation, I have called for the medical community to come together and become even more unified for redevelopment of community health care by working toward solutions to the various problems that are affecting health care. Along with urging the construction of a health care provision system compatible with the actual situation in our communities, I have also clarified specific goals for facing the super-aged society that is coming in 2025.

First, what is most important to me is the position of standing with the people. This is because my duty as a physician is to help provide decent and healthy living for the people throughout their entire lives. The philanthropic benefit of the medical science and health care that we provide is something that should be spread widely among the people.

The real task of nation building is to make a society in which people can live healthy and secure lives, as well as to raise people who are able to support such a society. Health care is certainly at the root of such a society.

My duty in my second term as president is to gather our strength to find solutions to the numerous difficult problems affecting health care. For this, a map is required that shows the correct route to achieve our goals. The higher the benchmarks, the more detailed they become, and thus require even more concrete plans.

As president, I propose three policy directions in order to bring the conceptual direction of Japan Medical Association (JMA) closer to the form of health care that we should have.

The first direction is strengthening the

organization.

In order to improve further the health of the people as we advocate, we must strengthen and increase the previous level of organizational power of medical associations. In September of last year, a working group considering organizational strengthening was launched, and discussed the current state of the organization and specific measures to increase the acquisition of members. Some of these measures have already been implemented, and the details have been published as a preliminary report.

On the one hand, it has not yet been communicated well to the people just how medical associations contribute to community health and how they have prepared the groundwork for the health and welfare of residents. We physicians consider the contribution to community health to be the duty of physicians as a matter of course, but it is true that we have not made a positive campaign to tell this to the people. However, this means that the organization known as a medical association is not properly understood. Concerning the way of thinking about health care and the measures that I advocate, it has remained difficult to obtain support or a feeling of commonality with the Japanese people. As former Prime Minister Kakuei Tanaka once said, in democratic politics, no matter how excellent one policy is, it cannot be effective if it is not able to receive the support of the citizens.

To this end, we have developed the Japan Medical Association Mission Statement, which emphasizes the unity of physicians and the relationship between the JMA and the people, in order to express the principles and goals of the JMA clearly to the nation and to all physicians

*¹ This is a revised English version of the policy address delivered in Japanese by Dr. Yoshitake Yokokura at the 132nd Regular General Assembly of the JMA House of Delegates held in Tokyo, June 28, 2014.

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

in way that is easy to understand, and particularly to raise awareness that the JMA is a group of medical professions that stands with the people and is definitely not a pressure group,

Continuity is power, and for this, a variety of efforts are required, and reform cannot be achieved in just one day. Therefore, we have made the Japan Medical Association Mission Statement our banner, and while planning even greater unity of the health care sector, and building a community-based vision of health care for the people, will continue to communicate broadly with our members and the people, and deepen our various public interest activities intended to improve the health of the people.

The second direction is support of community health care.

In anticipation of 2025, when baby boomers will become late-stage elderly, the development of a system of health care that comprehensively supports the community (“comprehensive community health care”) in the public universal health insurance system that is based on primary care physicians who are not just gatekeepers but actively coordinate care, should be carried out through functional specialization of and cooperation among hospitals, provision of adequate in-home health care and long-term care, recruiting and retaining health care personnel, and improvements in the workplace environment. On the one hand, the way of providing health care for the people will change along with this, and the demands and trends in society will also change.

By 2040, this demographic shift will also place some localities at risk of disappearing due to reduced population. But people are unable to live in a place without health care. Health care is an indispensable lifeline and also the basis for community building.

The way of providing community health differs depending on the community. This is because the demand for health care and the health care resources required are different in various communities. There is a concern that the currently functioning community health care system will be broken by the national government operating a single system across different conditions of health care.

As a group of medical professions, the JMA expresses a clear vision from the standpoint of protecting health care for the people, and must

exercise the appropriate power to realize this vision. In August of 2013, the JMA issued a joint declaration on the state of the health care provision system with the Conference of Four Major Hospital Associations.

In the future, we will implement a hospital function reporting system as part of a new fiscal support system for reform of the health care and long-term care service provision system. Based on a vision that takes into account the special characteristics of each prefecture, we will work to develop policies that continue to protect the health of community residents.

Protecting community health means having local government and local medical associations as the main actors instead of a top-down approach led by the national government. Human and physical resources in a community will be employed after re-evaluation, and community building in a manner in the context of and reflecting the actual conditions in the community.

When thinking about the future of Japan and the coming super-aging society, medical associations that know the community and stand with the community must build a comprehensive community care system that provides integrated, appropriate health care, long-term care, welfare, and livelihood services in a community network centered on primary care physicians. The JMA must also cultivate them and develop their capabilities in the aging society.

The third direction is thinking about the future of health care.

Our country’s public debt is over 1,000 trillion yen or ca.10 billion USD, and economic growth is sluggish. Furthermore, the working age population in Japan is projected to shrink by 20% in the future, even if our birth rate recovers, if women’s participation in the workforce were at Swedish levels, and if older persons stayed in the workforce for five more years.

Under these conditions, the costs of social insurance, mainly for health care and long-term care, are projected to rise, so in the future, policies called “regulatory reform” or “growth strategies” will continue to bring pressure to restrict the scope of insurance benefits from the standpoint of fiscal crisis. Repeated health care reforms driven by fiscal concerns have and will continue to run the risk of leading to the collapse of universal health insurance in Japan. Even now there have been loud cries for regula-

tory reform to reduce “excessive medical care” and the move towards commercialization of the core of medical care has accelerated.

On June 24, 2014, the cabinet approved the main policy recommendations of the three consultative councils of the cabinet: the Basic Policies of the Council on Economic and Fiscal Policy, regulatory reform plans of the Council for Regulatory Reform, and the Growth Strategy of the Industrial Competitiveness Council. In these, the following measures are notable: (1) Expansion of treatment only partially covered by health insurance; (2) Spending targets for each prefecture/metropolitan area; (3) Frequency of revision of the pharmaceutical price list; (4) Healthcare delivery system; (5) Funding sources for health insurance; (6) Promotion of self-medication; (7) Promotion of health care-related industries; (8) Promotion of the information technology transformation of health care and long-term care; (9) Encouragement of female physicians. The JMA intends to scrutinize closely each of these points, while expressing a clear direction for the form of health care we should have.

In particular, there is a proposal to expand the treatments that are only partially covered by health insurance. For new ways of providing health care, safety and effectiveness must be assessed. Moreover, a major precondition is that the people someday be able to have equal access to these treatments by their eventual complete inclusion in health insurance coverage.

There is also a proposal for targets for health care spending set for each prefecture. We are currently working to ascertain precisely the conditions in communities, and are preparing a community health care vision that unifies prefectural government authorities and community medical associations. There is a concern that numbers-based targets alone could make it more difficult to provide appropriate community health care.

For the pharmaceutical price list revision, the wording is that the way of conducting the pharmaceutical price survey and revisions of the pharmaceutical price list, including their frequency, will be considered while taking into account the effects on the main fee schedule for health insurance treatment, but at first an annual revision is called for.

For the health care delivery system, the establishment of a primary care system is proposed,

but in Japan, primary care is already being provided by primary care physicians.

What have repeated health care reforms driven by fiscal concerns actually brought for the people? When these arguments have been brought repeatedly, I have always spoken up clearly to protect the people’s health care system, while at the same time asking for the cooperation of JMA members and the understanding of the people. But now, I feel painfully aware that again, we must argue clearly for a way of evaluating regulations that are to protect the health of the people.

To build a society in which there is neither too much nor too little health care necessary for all people, we must promote lifelong health programs, extend the healthy life expectancy, and advance reforms appropriate for the times, while at the same time we must preserve universal health insurance that is sustainable.

For the future of health care, we are putting our effort into gathering and analyzing the essential information, particularly from the primary care physicians and community medical associations who are the closest to the people, in order to build a system that makes it possible to make policy proposals about what is truly necessary in the community, rather than about the policies which the national government or the Ministry of Health, Labour and Welfare consider to be necessary. In order to convey the JMA perspective in an understandable manner that ends information disparities among the membership, we will communicate after developing specific points based on assessing and analyzing the actual situation. Moreover, health care politics is also important, and in the budget process, it is important to assure the availability of funding sources.

The purpose of carrying out what I have set forth today as three directions — strengthening the organization, supporting community health, and thinking about the future of health care — is the health and health care of all of the people.

For this, I will continue to maintain a critical attitude for future government policies, judging according to the criteria of whether these policies contribute to safe health care for the people and whether these policies can protect universal health insurance through public health insurance.

The JMA itself represents all physicians in

Japan, and takes pride in being the only group that leads the entire health care sector. It will continue to lead medical science and medical care at the national level, cooperating at the same time with many relevant organizations.

In preparing to build an improved health care system for the people, we are determined to follow the three directions and carry out the duties of the JMA, aiming to be a medical association that stands with the people as a group of medical professions.

While municipal medical associations, prefectural medical associations, and the JMA each have their own roles to play, we are now at a critical moment concerning whether it is possible to establish a sustainable health care system.

There are some difficult issues under the

present organizational structure, represented by the handling of comprehensive community care. In the past two years, there have been rapid changes in the kind of health care delivery system that is being sought, as it is necessary to have the power to handle a variety of scenarios such as large scale disasters and pandemic diseases.

In order to bring about the community health care that Japan should have, the JMA will use its strong communication power to work to lead national policies in the proper direction, while continuing to warn that national policies should not go in the wrong directions. It will at the same time work for even closer unity in the health care sector in the future.

Guidelines for Iodine Prophylaxis as a Protective Measure: Information for Physicians

JMAJ 57(3): 113-123, 2014

Sumito YOSHIDA,¹ Mayo OJINO,¹ Takayoshi OZAKI,¹ Takushi HATANAKA,¹
Kaori NOMURA,² Masami ISHII,³ Kazuaki KORiyAMA,⁴ Makoto AKASHI⁵

Introduction

Following the Tokyo Electric Power Co., Inc. (TEPCO) Fukushima Daiichi Nuclear Power Station accident in the aftermath of the Great East Japan Earthquake in 2011, there was great pressure to overhaul Japan's nuclear emergency preparedness measures. The nuclear emergency response guidelines were formulated by the Nuclear Regulation Authority (NRA) on October 31, 2012, and subsequently revised on June 5, 2013. Under the revised policy, local public authorities in Precautionary Action Zones (PAZ) are to construct a system enabling the distribution of iodine*¹ to local residents in advance, and shall hold information meetings for local residents regarding the distribution of iodine at which physicians explain the prophylactic use and adverse reactions, etc. of iodine.

Thus, the Japan Medical Association (JMA) has formulated the guidelines for the administration of iodine, because it is anticipated that an emergency resulting from an accident at a nuclear power facility will affect not only the area immediately surrounding the nuclear facility but also a broader area including numerous prefectures; the guidelines are intended as reference materials for many physicians acting as local opinion leaders at information meetings on the distribution of iodine to enable them to smoothly explain the benefits and risks of iodine prophylaxis to block the uptake by the thyroid gland of radioactive iodine released to the environment,

as well as to enable physicians and medical associations to swiftly distribute iodine at the time a nuclear emergency occurs.

These guidelines are distributed to local physicians in areas surrounding the Sendai Nuclear Power Plant (NPP) in Kagoshima Prefecture to provide a better understanding of predistribution of iodine to residents in the areas.

We hope that physicians and local medical associations will use their medical knowledge regarding the timing of distribution and administration of iodine to actively advise local residents and local public authorities, and thereby help reduce the risks of radiation exposure of the thyroid gland in local residents upon a nuclear emergency.

In future, the JMA intends to continue to promote various disaster prevention measures, including nuclear emergency preparedness, in order to protect the lives of the people of Japan as a healthcare professionals' organization. We ask for your continuing support in these endeavors.

Necessity of Iodine Prophylaxis as a Protective Measure in the Event of an Accident at a Nuclear Facility

Radiation exposure and internal contamination

In the event that an accident occurs at a nuclear facility (a nuclear power station; nuclear reactor; or facility that separates radioactive isotopes, processes or reprocesses used nuclear fuels, or

*1 Iodine: Potassium Iodide (KI) for thyroid blocking in a radiation emergency.

¹ Researcher, Japan Medical Association Research Institute, Tokyo, Japan (ojino@jmari.med.or.jp); ² General Manager, Pharmaceutical Policy Office, Japan Medical Association, Tokyo, Japan; ³ Executive Board Member for Emergency and Disaster Medicine, Japan Medical Association, Tokyo, Japan; ⁴ Emergency Life-Saving Technique Academy of Kyushu (ELSTA KYUSHU), Fukuoka, Japan; ⁵ Executive Director, National Institute of Radiological Sciences (NIRS), Chiba, Japan.

stores used nuclear fuel), the radioactive materials (substances that emit radiation) released to the environment from the facility through vents, etc., include iodine, cesium, strontium, plutonium, and others. The radiation emitted by these substances damage the DNA of cells. This is the main cause of health damage by radiation.

Exposure to radioactive materials is called “radiation exposure”; exposure from outside the body is called “external exposure,” while exposure from radioactive materials that are incorporated into the body is called “internal exposure or contamination.” These guidelines have been formulated in anticipation of cases of exposure—mainly “internal exposure”—to radioactive iodine (which has a tendency to accumulate in the thyroid gland).

The impact of internal exposure is determined by the effective dose coefficient (sievert/Becquerel: Sv/Bq), which expresses the radiation dose when 1 becquerel of radioactive materials has been incorporated. This is determined by such factors as the type of the radioactive materials, their chemical forms, incorporation pathway, size of particles and age.

In the case of internal exposure, the radioactive materials emit radiation within the body, and the effects of incorporated radioactive materials depends on the time required for the disintegration of one-half of the radioactive material (physical half-life) and also the time an organism takes to eliminate one half the amount of a radioactive material incorporated (biological half-life). The physical half-life of iodine-131 (^{131}I) is approximately eight days.

Based on basic research and epidemiological studies conducted thus far, in Japan the annual dose limit for the public other than naturally occurring radiation or radiation used by medical facilities for testing and medical treatment has been deemed to be 1 mSv per year as an effective dose, and this level has been protected throughout the regulatory system.

The “effective dose” is the tissue-weighted sum of the equivalent doses in all specified tissues and organs of the body; this quantity takes into account each organ or tissue being irradiated. When radiation exposure to only the thyroid gland is being considered, the equivalent dose is used. The “2007 Recommendations of the International Commission on Radiological Protection” (ICRP Publication 103) defines 1:25 as

the ratio of effective dose to equivalent dose in the case of internal exposure to iodine-131; when the equivalent dose for the thyroid gland is 25 mSv, the effective dose is 1 mSv. The dose limit for physicians, radiological technologists (the same as for nuclear power facility workers), and other workers in occupations involving radiation exposure is “100 mSv over 5 years, but the dose limit should not exceed 50 mSv in any single year.

Health damage caused by radioactive iodine

When radioactive iodine is incorporated into the body, it accumulates in the thyroid gland, and the radiation emitted can cause thyroid cancer within a few years to a few decades. While the Japan NRA has presented papers finding that “the results of epidemiological studies conducted on external radiation exposure in Hiroshima and Nagasaki indicate the possibility that increased risk of thyroid cancer persisted for people also in aged 40 years or older,” it must be noted that there is no current international consensus reached on this point.¹

Furthermore, in the case of exposure to a high radiation dose, over a period of several months hypothyroidism may develop as a result of reduced excretion of thyroid hormone due to the death of thyroid gland cells.

Radiation can affect the thyroid gland both in the case of external radiation exposure and in the case of internal exposure where radioactive iodine accumulates in the thyroid gland. However, in the event that a serious accident occurs at a nuclear power facility, radioactive iodine is released into the atmosphere, and there is an increased risk of people inhaling the radioactive material or ingesting it by eating contaminated food.

Effects of iodine

If the radioactive iodine released by nuclear power facilities enters the human body through inhaling or ingestion it, approximately 10-30% of the amount incorporated will accumulate in the thyroid gland within 24 hours of contamination, and most of the remaining radioactive iodine will be eliminated from the body by the kidneys in urine.

As the result of exposure to radiation from this radioactive iodine, thyroid cancer or other diseases may develop in four years to a few

decades.

The dose of this thyroid exposure can be averted by taking iodine (^{127}I) within 24 hours before intake of radioactive iodine. This measure has been also reported to be effective for blocking radioactive iodine in the thyroid if iodine is administered within four hours after intake of radioactive iodine.²

When adequate quantities of iodine are administered, the iodine is incorporated into the circulation system and the concentration of iodine is increased in the blood, leading to high concentration of iodine in the thyroid gland. The synthesis of thyroid hormone requires iodine in the blood. Whereas detailed mechanisms for the blocking of thyroidal uptake of radioactive iodide are not established, several mechanisms have been postulated: saturation of the iodide transport mechanism, interference with intra-thyroidal organification of iodide, isotope dilution, and inhibition of hormone release.² Thus, saturation of the iodide transport system by excess iodide leads to blockage of radioactive iodine uptake in the thyroid and the interference with intra-thyroidal organification of iodide results in inhibition of the thyroid hormone synthesis. Dilution of the radioactive iodine with one reduces probability for uptake of radioactive iodide.

When a healthy adult takes iodine, the concentration of iodine excreted in the urine peaks within 1-2 hours of taking the preparation, the amount of iodine in the urine gradually decreases, and the most of incorporated iodine will be eliminated from the body within 72 hours.

Iodine cannot prevent radioactive one from entering the body. Iodine is only effective for reducing the internal exposure of the thyroid gland to radioactive iodine and cannot reduce the dose of exposure to radioactive materials other than materials. Furthermore, administration of iodine will not treat injury of the thyroid gland or make the thyroid release radioactive iodine restore the thyroid gland after incorporation.

Administration of Iodine

Instructions for administration

Concerning administration of iodine to residents, the NRA has provided as below in the guidelines; information on pre-distribution of iodine to the local residents has to be provided based

on the Authorities policies at meetings

Administration within Precautionary Action Zones (PAZ)

For commercial nuclear reactors to generate electricity, in Precautionary Action Zones (PAZ) within a radius of approximately 5 km of the reactor, when a “General Emergency” is called, the Nuclear Emergency Response Headquarters or the local public authorities will issue instructions for the administration of iodine in addition to instructions for evacuation, therefore iodine should be taken in accordance with these instructions in principle.

However, those who cannot take iodine such as infants (whose thyroid glands are more sensitive to radioactive iodine than those of adults), and the parents/guardians of infants are to evacuate on a priority basis at the “Site Area Emergency” stage where administration of iodine is not necessary.

Administration in areas outside Precautionary Action Zones (PAZ)

In areas outside PAZ, when a “General Emergency” is called, based on the instructions of the National Government or local public authorities, people should immediately shelter indoors, thereafter the NRA will determine whether it is necessary to distribute/administer iodine in addition to evacuating or sheltering indoors, depending on the status of the nuclear power facility and amounts of airborne radiation. If the Nuclear Emergency Response Headquarters or the local public authorities then issue instructions for the administration of iodine, it should in principle be taken in accordance with these instructions.

Dose and frequency

As a general rule, iodine should be taken once only; continuously repeated administration should be avoided. However, in the case that the possibility of internal exposure from radioactive iodine continues for 24 hours or more and a second administration is unavoidable, subsequent iodine should be administered at an interval of 24 hours or more.

As a general rule, repeated dosing should only be carried out when the NRA has determined that another administration is necessary.

Dose (Table 1)

(1) Adults and adolescents aged 13 years or

Table 1 Recommended single dose of iodine prophylaxis

Age groups	Iodine amount (mg) Amount equivalent to potassium iodide	Potassium iodide amount (mg)	Potassium iodide pills
Neonates (Birth to 1 month)	12.5	16.3	—
Infants (1 month to 35 months)	25	32.5	—
Children (3 years to 12 years)	38	50	1 tablet
Adults and Adolescents (13 years or over)	76	100	2 tablets

(Source: Nuclear Regulatory Agency.³)

- over: 2 tablets (1 tablet contains 50 mg of potassium iodide; 2 tablets contain 100 mg)
- (2) Children aged between 3 and 12 years: 1 tablet (50 mg of potassium iodide)
 - (3) Infants aged between one month and 35 months: 32.5 mg of potassium iodide
 - (4) Neonates: 16.3 mg of potassium iodide

Note that for infants aged under three years (36 months), neonates, and others for whom taking tablets is difficult, liquid iodine prepared from powder by a pharmacist should be administered.

Furthermore, people of all ages should be administered with iodine, but in principal priority is to be given to small children and youth.

Precautions Regarding Administration of Iodine

Adverse reactions

At the time of the Chernobyl nuclear power plant accident in 1986, iodine was distributed to 10 million children and 7 million adults in Poland, and follow-up studies were conducted on 34,491 of these people. The results of these studies showed a 0.37% of neonates with hypothyroidism, and 4.6% of children experienced symptoms such as vomiting, skin rashes, stomach pain, diarrhea, and headache. It is not clear whether these symptoms were adverse reactions of iodine, and since then it has been reported that these adverse effects were transient.⁴

Contraindications and precautions

Those with a medical history of hypersensitivity to iodine substance are deemed to be inappropriate for the administration of iodine. When it

has been revealed that a resident may develop such symptoms after predistribution of iodine, he/she has to be informed to not take iodine.

In addition, iodine should be administered with caution in the case that the person exhibits any of the following symptoms.

- (1) Hypersensitivity to iodinated contrast medium
- (2) Thyroid dysfunction
- (3) Renal dysfunction, myotonia congenital, hyperkalemia
- (4) Hypocomplementemic urticarial vasculitis, Duhring dermatitis herpetiformis
- (5) Pulmonary tuberculosis

Medicines possibly interacting with iodine

For people currently under medical treatment, in the case that they take iodine in addition to their medicines currently being taken, there is the possibility of health effects due to interaction between the medicines and iodine. As a general rule, iodine is administered once only following a nuclear power facility accident, and so the risk of serious health effects due to the interaction of the drugs seems less concerned; however, citizens taking the medicines shown in **Table 2** should be encouraged to consult a physician before taking iodine. The same applies when people who have received iodine in advance newly start any of these medicines.

Since the medicines that people are currently taking should be checked, it is recommended to distribute iodine based on advice of pharmacists at information meetings to local residents for iodine predistribution.

Table 2 Examples of medicines with which the iodine could interact

(1) Preparations containing potassium: potassium supplements Drug examples: Slow-K, Aspara Potassium
(2) Lithium preparations: Bipolar disorder Drug examples: Limas
(3) Antithyroid agents: hypothyroidism, etc. Drug examples: Thyradin, Propacil, Mercazole
(4) Potassium-sparing diuretics: hypertension Drug examples: Aldactone A, Selara, Triteren
(5) ACE inhibitory agents: hypertension Drug examples: Adecut, Captopril, Renivace
(6) Antihypertensives: hypertension Drug examples: Preminent, Micombi, Rezaltas

Note: It is possible to search for detailed names of pharmaceuticals using the RAD-AR Council, Japan “Kusurino-Shiori [Drug information Sheet].” (<http://www.rad-ar.or.jp/siori/english/index.html>)

Administration to children

An iodine product currently available for predistribution is potassium iodide (50 mg), “Potassium Iodide Tablet 50 mg (Nichi-Iko Pharmaceutical Co., Ltd.),” which has a shelf-life of approximately 3 years.

For this reason, dose is 1 tablet for children aged between 3 and 12 years and 2 tablets for adolescents aged 13 years or over.

However, for infants aged under three years (36 months), neonates, and others who cannot take tablets, liquid iodine prepared from powder by a pharmacist should be administered. For this reason, in addition to constructing a system for preparing and distributing liquid iodine at times of emergency, the development of syrup-type iodine products that can be stored for a certain period of time is required.

In addition, in case of pediatric use, beware that there is the possibility that administration may cause rashes or suppress thyroid function.

Pregnant, nursing and lactating women

Women who are or could possibly be pregnant should be administered with a single dose of iodine in a case where the effectiveness of reducing internal exposure of thyroid gland outweighs the risk of taking iodine. However, multiple doses must be avoided.

Furthermore, in the case that iodine is administered during the third trimester of pregnancy, there is a risk that hypothyroidism may

affect mental development to neonates.

Iodine can cross the placental barrier and cause thyroid adenoma or thyroid dysfunction in the fetus.

Nursing mothers must avoid breastfeeding when they take iodine and for a certain period of time afterwards.

Iodine can transfer into breast milk so breast-fed infants may develop skin rashes and/or its thyroid functioning may be suppressed. In addition, it is reported that 65-80% of the potassium iodide in iodine tablets is eliminated from the body in urine within 24 hours.

The elderly

The NRA has announced that “based on recent research, it has been reported that the risk for developing thyroid cancer for people aged 40 years or above decreases with age, but this risk remains amongst the elderly. It has also been reported that the possibility of adverse reactions [from taking iodine] such as temporary suppression of thyroid function increases with age.”

However, it must be noted that international evaluations have not been established regarding the risk of developing cancer amongst elderly people.

As age increases, organ function may be reduced in addition to decrease in vision and hearing. For example, if gastric acid secretion and/or gastrointestinal movement is reduced, absorption of drugs may be suppressed.

Furthermore, because it becomes easier for the ingredients of administered drugs to remain in the body due to decrease in liver detoxification and renal excretion, elderly people should be encouraged to consult a physician before taking iodine.

Effects of overdose

Taking more than the recommended dose of iodine will not increase the protective effects; it rather increases the possibility of adverse events such as thyroid dysfunction. Therefore, no more than the recommended dose can be administered. Even if a dose higher than the prescribed dose is accidentally administered, it is not necessary to take such measures as to get the person vomited, it is recommended that the person be checked to determine whether there has been any abnormal change in their physical condition and a physician consulted.

Predistribution of Iodine at Residents' Information Meetings

At residents' information meetings regarding the predistribution of iodine, residents should check the items explained by the physician on the check sheet themselves and have these items cross-checked by a pharmacist or local government employee before being issued with a iodine in exchange for a receipt. Of the items residents fill out on their check sheets, if the person checks items under "Inappropriate for administration" (does the person have a health history of hypersensitivity to the ingredients of iodine or iodine?) or items under "Administer with caution," the following measures should be taken.

Items under "Inappropriate for Administration"

- Residents who reply "item does not apply to me"
Distribute the iodine in exchange for a receipt.
- Residents who reply "do not know"

It is important to take the necessary preparations and for all staff involved to work together; for example, if it is possible for a physician to determine whether iodine can be administered through interviews at the meeting venue with the residents regarding their health history, it

can be decided that iodine can be distributed.

- Residents who reply "item does apply to me"
Do not distribute iodine to such residents.

Items under "Administer with Caution"

- Residents who reply "item does not apply to me/do not take medication"
Distribute the iodine in exchange for a receipt.

- Residents who reply "do not know" or "item does apply to me/do take medication"

It is important to take the necessary preparations and for all staff involved to work together; for example, if it is possible for a physician to determine whether iodine can be administered through interviews at the meeting venue with the residents regarding their health history, it can be decided that iodine can be distributed.

Residents should be instructed to consult their family physician if there are any aspects of the items explained by the physician at the information meeting that they do not understand, including items other than the two mentioned above. They should also be instructed to take their completed check sheet with them when consulting with their family physician.

Evacuation in the Event of a Nuclear Power Facility Accident and Administration of Iodine

Evacuation or relocation in the event of a nuclear power facility accident

Evacuation and relocation in the event of a nuclear power facility accident are both safeguards to be implemented in the case that there is the possibility that local residents may be exposed to radiation levels higher than a prescribed level. Residents can reduce their exposure doses by distancing themselves from the radioactive materials and/or the radiation source.

Evacuation

Evacuation is carried out urgently when the levels of radiation being released into the atmosphere are higher than an approved level or there is a risk that they will become high, or in order to quickly separate residents from the site from which the radioactive materials are being released.

Relocation

Relocation is carried out in order to reduce needless exposure to radiation that would occur if residents continuously lived in the affected area, as well as to separate residents from the

Table 3 Timing of administration and effect of iodine

Administration 24 hours prior to exposure to radioactive iodine	Protective effect of 90% or higher
Administration 8 hours after exposure to radioactive iodine	Protective effect of 40%
Administration 24 hours after exposure to radioactive iodine	Protective effect of 7%

(Source: Preston LD, et al.¹)

affected area for a certain period of time.

Sheltering in place

Sheltering in place is a countermeasure carried out to reduce radiation exposure by the inhalation of radioactive substances and from neutrons and gamma radiation.

Sheltering in place is carried out under the instructions of the National Government or local public authorities in the case that residents are required to wait in order to reduce the risk of radiation exposure following a nuclear power facility until the National Government or local public authorities order evacuations, etc., or in the case that carrying out evacuations is difficult.

For hospitals and nursing care facilities in particular, in certain cases priority needs to be given to sheltering in place rather than evacuation. In such cases, sheltering in place in concrete buildings—which generally have a shielding effect and are relatively airtight—is effective.

Responses by medical facilities in consideration of vulnerable people

In consideration of vulnerable people requiring nursing care, etc., in the case that a nuclear emergency occurs and a recommendation or order to evacuate is issued, administrators of hospitals and other medical facilities shall swiftly and safely evacuate or transfer to another medical institution all inpatients, outpatients, and patients' visitors, etc. in accordance with an evacuation plan formulated in advance by each medical facilities and under the direction and guidance of physicians, nurses, and other staff.

Physicians' advice regarding distribution and administration of iodine

Regarding the timing of administration and efficacy of iodine, “administration of iodine 24

hours prior to exposure to radioactive iodine” has “an inhibitory efficacy of 90% or higher,” but “administration of iodine 8 hours after exposure to radioactive iodine” has “an inhibitory efficacy of 40%.” Moreover, “administration of iodine 24 hours after exposure to radioactive iodine” has “an inhibitory efficacy of only 7%”⁵ (Table 3).

Accordingly, it is important that, based on their understanding of the nuclear accident status and evaluation of risks for a broad area, not only the nuclear power facilities and the surrounding area, physicians and medical associations provide advice to local public authorities based on their medical knowledge regarding the timing of distribution and administration of iodine in order to reduce the risks to local residents.

In addition, one lesson learned from the Tokyo Electric Power Co., Inc. (TEPCO) Fukushima Daiichi Nuclear Power Station accident was that, in the case that local residents are unable to obtain information regarding instructions for evacuation and taking iodine due to interruption of telecommunications, as well as in the case that discussions are held with local public authorities regarding the necessity and timing of iodine administration—including when iodine are to be taken and their efficacy—the following items need to be checked.

- (1) Collection of information to enable a decision to be made as to whether or not there is a possibility of local residents being exposed to a certain level of radiation within 24 hours
- (2) Situation regarding iodine stockpiles
- (3) Situation regarding the preparation of explanatory pamphlets, etc., describing the health damage caused by radioactive iodine and the benefits/efficacy as well as adverse reactions of iodine, etc.

Table 4 Overview of Japan's emergency situation classifications

Classification	“Alert”	“Site Area Emergency”	“General Emergency”
Accident status Radiation effects to the general public (Statement of the Nuclear disaster response policy)	No (Not an emergency)	Rare (Possible)	Yes (Highly possible)
Main countermeasures Monitoring in emergency situations	Preparation	Implementation	(Implementation)
Preventative evacuation of people requiring evacuation*	Preparation	Implementation	(Implementation)
Safeguards for residents		Preparation	Implementation
Laws and regulations Act on Special Measures Concerning Nuclear Emergency Preparedness	—	Article 10 (Obligation to Notify of a Nuclear Emergency Preparedness Manager)	Article 15 (Declaration of Nuclear Emergency Situation)

(Source: Japan Atomic Energy Agency (JAEA).)

* Persons requiring evacuation: persons requiring support at times of disaster (people who are sick or injured, hospitalized, elderly, or disabled; foreign nationals, infants, pregnant woman, and others who require assistance in disasters) for whom evacuation would take more time than normal and who amongst those whose health risks would not increase due to evacuation, to whom iodine cannot be distributed in advance, or for whom administration of a stable iodine preparation is inappropriate but needs safeguards such as early evacuation at the “Facility Emergency” stage.

- (4) Situation regarding the preparation of medical questionnaires

Instructions for administering iodine in the accident/emergency zone

Under Japan's nuclear emergency policy, criteria have been established for prompt implementation of evacuation and other measures following the occurrence of a nuclear power facility accident.

Depending on the accident status, emergency situations are classified into three categories: “Alert,” “Site Area Emergency,” and “General Emergency.” In cases such as when the level of radiation near the perimeter of a nuclear power facility site is $5 \mu\text{Sv/h}$ or higher, if facility workers have received a warning from the National or a Prefectural Government, the situation is deemed a “Site Area Emergency,” and at this stage safeguards for local residents, etc.—that is, making preparations for the distribution of iodine while at the same time evacuating and/or administering iodine to vulnerable people—are to be implemented.

Furthermore, in the case that the above-mentioned radiation level rises to $500 \mu\text{Sv/h}$ or higher, the situation is deemed to be at the “General Emergency” stage—the level at which the general public is affected (or there is a high possibility the general public will be affected) by

radiation—and the distribution/administration of iodine and evacuations are carried out (**Table 4**).

Accordingly, it is important that local medical associations discuss with local governments concrete measures such as methods for administering iodine following evacuation procedures.

Administration of iodine in radiation emergency medical

When a nuclear emergency occurs, medical treatment for injured and sick people who could have been contaminated with a radioactive material or exposed to radiation is to be carried out smoothly at the first response stage in accordance with a medical care system that has been prepared in advance.

Under this system, as a general rule the person responsible for nuclear emergency preparedness for the affected area overall is to communicate instructions to medical institutions, etc., to promptly administer iodine in accordance with National Government instructions in the case that the release of radioactive iodine is anticipated or radioactive iodine has been released.

Methods for obtaining necessary information regarding evacuation and iodine administration instructions

In order to ensure the safety and security of

	Department in charge/ Telephone number	Name of person in charge
Nuclear power facility		
Municipality	Disaster:	
	Nuclear power:	
	Healthcare:	
	Other:	
Prefecture	Disaster:	
	Nuclear power:	
	Healthcare:	
	Other:	

Fig. 1 Example of a table of relevant organizations

local residents as well as support appropriate decision-making and action-taking by local residents themselves, the National Government and local public authorities are to endeavor to promptly convey and disclose accurate and easy-to-understand information to the general public. In the case of a nuclear emergency in particular, the following information is to be conveyed.

- (1) The situation concerning the nuclear power facility accident
- (2) Monitoring results
- (3) Weather forecasts
- (4) Forecasts for the diffusion of radioactive materials in the atmosphere, etc.

Furthermore, government information at the time the accident occurs can be conveyed via various methods, and so people should try to obtain information through the following methods.

- (1) TV, radio, one-segment (digital terrestrial) broadcasting
- (2) Local community broadcasting
- (3) The Internet, electronic bulletin boards for government announcements
- (4) Mobile terminals and other emergency flash news e-mail
- (5) Police information
- (6) Information from fire departments or volunteer fire companies, etc.

Moreover, it is important that local medical associations and other organizations obtain information from the local disaster response headquarters using telecommunications methods such as community wireless disaster information systems, satellite telephones, and disaster priority

telephones, to relay appropriate information to doctors and medical institutions.

Actions of Local Medical Associations in a Nuclear Emergency and Advance Preparations

It's important that local medical associations take the following 3 actions—(1) Collecting Nuclear Emergency-related Information, (2) Evaluating Risks of Radiation Exposure, (3) Sharing their Information with Medical and Health Professions—in a nuclear emergency and make each preparation for doing so in advance.

Collecting nuclear emergency-related information

First, local medical associations should turn on the following two “switches” in order to collect nuclear emergency-related information.

- (1) Turn on the TV and/or radio
- (2) Turn on their “risk management switch”

The “risk management switch” refers to beginning to gather information from the nuclear power facility, the prefecture/municipality headquarters for disaster control, the Off-site center, and health and medical care departments, and promptly beginning to provide the collected information to physicians and medical institutions. In preparation for this, a table of names of the organizations from which information can be obtained is to be drawn up in advance (Fig. 1).

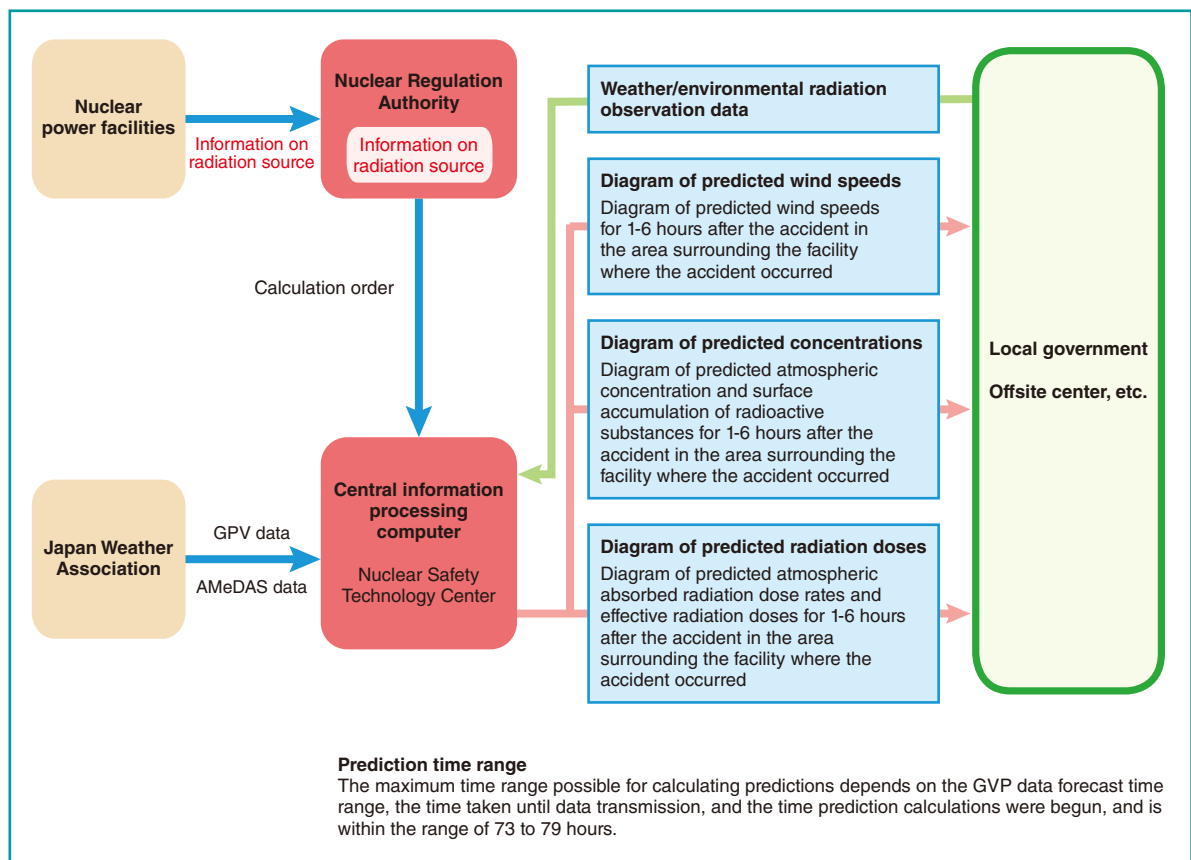


Fig. 2 Flow of SPEEDI information

Evaluating risks of radiation exposure

Next, it is necessary to evaluate risks of radiation exposure based on highly reliable information. For example, there is the System for Prediction of Environmental Emergency Dose Information (SPEEDI) data as useful information in Japan.

SPEEDI is a system to predict the atmospheric concentration of radioactive particles in the surrounding environment, radiation exposure amounts, and other environmental impacts, based on information of radiation source, weather conditions, and topographical data. This system can forecast the critical information such as the concentration of radioactive materials in the atmosphere, effective radiation doses from external exposure, and equivalent dose for the thyroid gland through inhalation (Fig. 2).

However, since some uncertainty is inherent in the forecasted information, decisions should be made based on the actually observed or detected values as much as possible.

Sharing information with medical professions on the affected areas

Medical professions such as physicians, nurses, and pharmacists will be involved in administering iodine tablets on the affected areas. The local medical associations should establish the system for providing nuclear emergency-related information and risk evaluations of radiation exposure for them promptly in a nuclear emergency.

Disaster Preparedness in Local Medical Associations

Collecting nuclear emergency-related information

Hospitals or medical association in local governments with nuclear facilities should share information required for evacuation and iodine with local governments in advance.

1. Information regarding the disaster prevention plans of the company of nuclear power plant,

2. Information about the social infrastructure environment
 - (1) Information regarding designated evacuation centers and concrete buildings suitable for sheltering in place
 - (2) Local government evacuation plans
 - (3) Documents regarding the location of public facilities, etc.
 - a. Daycare centers, kindergartens, schools, clinics, hospitals, nursing care facilities, facilities for disabled persons, etc.
 - b. Maps showing distance between these facilities and the nuclear power facility and localization of the nuclear power facility
 - (4) Information regarding radiation emergency medicine facilities
 - (5) Information regarding the content and locations of stockpiles of iodine and equipment for medical care
 - (6) Documents and lists of names, etc. for people requiring assistance to evacuate, etc.

Training and education against a nuclear disaster

At the time of the accident at the Fukushima Daiichi Nuclear Power Station, physicians were asked for explanations on health effects of radiation and advice about iodine administration by residents, when they provided medical care at first aid stations. However, they could not make satisfactory responses to the residents because of lack of information and knowledge on radiation and its effects.

Since physicians use radiation for their clinical works and are experts of health care, they

have to have basics on radiation. They also play important roles in radiation emergency. Therefore, it is necessary to conduct training and educational programs against a nuclear disaster for physicians.

JMA held a symposium of “Disaster Medicine and Medical Associations” (<http://www.med.or.jp/english/journal/toc/v55no05.html>) and “the JMAT Training Course on Disaster Medicine” in 2012. The reports of these conferences have been posted on the JMA website and are available to anyone for reference.

Acknowledgments

We acknowledge with gratitude the lots of advice of Mr. Yuji Noto, Division chief, International division, Japan Medical Association and Mr. Paul Talcott, Researcher, Japan Medical Association Research Institute in developing the guidelines; and the cooperation of Ms. Yukako Maniwa in translating the guidelines into English.

References

1. Preston DL, Ron E, Tokuoka S, et al. Solid cancer incidence in atomic bomb survivors: 1958-1998. *Radiat Res.* 2007;168:1-64.
2. Sternthal E, Lipworth L, Stanley B, Abreau C, Fang SL, Braverman LE. Suppression of thyroid radioiodine uptake by various doses of stable iodide. *N Engl J Med.* 1980;303:1083-1088.
3. Nuclear Regulatory Agency. Distribution and Administration of Stable Iodine Preparations (for Medical Professionals).
4. Nauman J, Wolff J. Iodide prophylaxis in Poland after the Chernobyl reactor accident: benefits and risks. *Am J Med.* 1993;94:524-532.
5. Zanzonico PB, Becker DV. Effects of time of administration and dietary iodine levels on potassium iodide (KI) blockade of thyroid irradiation by ¹³¹I from radioactive fallout. *Health Phys.* 2000;78:660-667.

Enhancing International Contributions Centered on WMA Activities and Community Health^{*1}

JMAJ 57(3): 124-134, 2014

JMA Global Health Committee

Introduction

The Japan Medical Association (JMA) launched the Global Health Committee in 2008 to invigorate its domestic activities and to enhance its international influence in the global community. Each committee operates for a term of two years, and the 3rd Global Health Committee carried out its activities in 2012 and 2013.

The 1st JMA Global Health Committee Report summarized the activities and achievements of the JMA's Global Health Committee and was issued in March 2010. In addition, the report detailed the history and significance of the JMA's global health activities and presented examples of activities in recent years. It also indicated that the JMA should strengthen its internal organizational structure to promote global health activities.

For the 2nd term, the JMA President proposed the following theme: "Promoting JMA strategies for future global health and community health." First of all, in response to the recommendations of the 1st report, the Global Health Committee's organizational structure was transformed. It was decided that committee membership would comprise specialists in global health and representatives of prefectural medical associations. In addition, all committee members were made editorial staff of the JMA's international journal, the Japan Medical Association Journal (JMAJ). Moreover, the Great East Japan Earthquake disaster occurred on March 11, 2011, and as the committee identified this disaster as one of the most important issues for the JMA, a report was compiled and it summarized the

domestic and international activities of the JMA centered on the disaster. This report presented four major recommendations: (1) Community health specialists and global health specialists should cooperate and work together to tell the disaster experience to the world, focusing on Japan's characteristic community health activities; similarly, the committee team should communicate the JMA's earthquake support activities to the world as they were characterized by the mobilization of available resources both from the affected areas and other supportive Japanese prefectures; (2) JMA should demonstrate strong leadership in the World Medical Association (WMA), Confederation of Medical Associations in Asia and Oceania (CMAAO), and the Takemi Program in International Health as part of the JMA's global health program; (3) Cooperation should be promoted among several committees within the JMA (coordination between the Global Health Committee and Disaster/Emergency Medical Care Committee, etc.); and (4) The lessons learned from the Great East Japan Earthquake should be put to effective use in the event of future disasters.

For the 3rd term, the JMA President proposed the following theme: "Enhancing international contributions centered on WMA activities and community health." This theme is directly related to the cooperation of Japanese community health and global health specialists as described in the first recommendation above. It is also related to strengthening the JMA leadership in international health programs as described in the second recommendation above, although the JMA has already demonstrated strong leader-

*1 This article is based on the report compiled by the JMA's Global Health Committee in February 2014 (jmaintl@po.med.or.jp).

ship in the WMA, CMAAO, and the Takemi Program as part of committee activities during the committee's 2nd term.

During the committee's 3rd term, WMA undertook the huge task of revising the Declaration of Helsinki, and this was a period in which the JMA's contribution was especially required. As young and upcoming physicians from around the world were beginning to participate in WMA meetings, young Japanese physicians were also expected to join them during this period. Moreover, the 30th anniversary of the Takemi Program took place in 2013, and the Global Health Committee played a key role in organizing it. Lastly, the Great East Japan Earthquake, which had been a key issue since the committee's 2nd term, remained an issue in Japan. As global society had watched the process of recovery in the disaster zone, the Global Health Committee reported the JMA's activities on these throughout the world.

This report first of all describes the JMA's global health activities that are directly connected to the WMA and CMAAO. Second, it describes the activities of the Junior Doctors Network (JDN), which has become active as part of the committee's global health activities. Third, the report provides a summary of events held in Japan to commemorate the 30th anniversary of the Takemi Program. Finally, it describes the JMA's support activities for the Great East Japan Earthquake and other disaster/emergency support activities, and then presents recommendations about how the JMA's future global health activities should be strengthened.

WMA and CMAAO Activities

Of the activities carried out by the Global Health Committee during the 1st and 2nd terms, WMA- and CMAAO-related activities have already been described; however, because they are directly related to the theme proposed by the JMA President for this term, the histories of these organizations are worth mentioning here.

History of the JMA in relation to the WMA and CMAAO

The international activities of the JMA cannot be discussed without mentioning the history of the WMA (established in 1947) and CMAAO (established in 1961).

After WWII, GHQ ordered the JMA to disband, and the new JMA was re-launched postwar as a voluntary membership organization. The new JMA expressed profound regret for the association's undesirable actions during WWII, such as its relationship with the military as a compulsory membership organization. Following procedures stipulated by the international community, alongside the German Medical Association, in 1951 the JMA was allowed to become a member of the WMA as the only organization representing Japanese physicians. Even when simply unrolling and examining this history of how the JMA was re-established in international relations, the relationship between the JMA and the international community should not be overlooked. As the JMA had to resolve huge domestic problems, it tended to be perceived as an organization which focused only on domestic issues, and the significance of its international activities was forgotten. However, when the JMA was re-launched postwar, the *raison d'être* of the association as Japan's representative medical association was undoubtedly established through international activities. We should recall this history from time to time.

In establishing CMAAO, it was the fervent desire of former JMA President Taro Takemi for the JMA to unite the voices of Asian countries and regions. He believed that uniting Asian voices would strengthen the involvement of Asian countries in the WMA. To realize this mission, he worked together with representatives of the relevant national medical associations, eventually launching CMAAO in 1961 as a confederation of national medical associations in the Asia-Oceania region. Formulated over 50 years ago, this broad platform has included Hong Kong and Macao and been centered in Indochina. Now it covers an area reaching from India to Australia and New Zealand, and it of course includes Japan, as well as the Republic of Korea (ROK) and Taiwan. It is useful to look at the characteristics of CMAAO's 18 member national and regional medical associations. It should be noted that there is a variety of different religions (including Buddhism, Hinduism, Islam, and Christianity), languages, cultures, and national situations represented. Despite such differences, CMAAO members have worked together continuously for more than half a century. Unfortunately China—which is a member of the WMA

alongside Taiwan—has not joined CMAAO yet; however, the size of the population included in the CMAAO membership in the Asia-Pacific region is overwhelming other regions.

WMA activities during the 3rd term

During the 3rd term, the Global Health Committee was deeply involved in WMA activities. A major agenda item at the 2013 WMA General Assembly in Fortaleza, Brazil, was the revision of the Declaration of Helsinki (DoH). Its 50th anniversary was celebrated in 2014 and several years have been spent in completing the revision in time for this occasion. As is widely known, the WMA formulated the “Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects” to provide ethical guidelines for physicians. WMA working groups have been continuously carrying out revision work. The revisions adopted at the 2008 WMA General Assembly in Seoul, ROK, were also extensive and also took several years to complete.

However, at the 2013 WMA General Assembly, opinions about the use of placebos differed amongst Latin America, Africa, and other regions of the world. Therefore, the final outcome remains in the balance until the moment when the General Assembly adopts the revisions. For this reason, at the 2013 General Assembly, then-WMA President Dr. J. Edward Hill established a working group to continue discussing the placebo issue. As the deliberations of this working group continued, members also discussed other sections of the DoH. Consequently, the working group was allowed to expand its role to revise the entire DoH document.

Following lively debate within the working group over several years, the structure of the DoH has been changed. For example, subtitles were added and chapters were modified. Furthermore, various elements of the DoH were also revised. These include measures addressing socially vulnerable groups, compensation, big data, advanced medical care, and Ethics Committee functions. The revision process continued, and finally resulted in major amendments.

The Expert Conference on the Revision of the DoH was held in Tokyo from February 28 to March 1, 2013. It provided a precious opportunity for the working group to hear opinions from the Asia region. The JMA also made suggestions about compensation, big data, and Ethics Com-

mittee functions, in particular. The essence of these suggestions was included in the final revision proposal following further discussions by the working group and the expert conference held in Washington D.C. at the end of August 2013. It was then agreed to prepare a separate statement focusing on specific elements—in line with the times, these were information-related themes, including big data, and DoH sections concerning advanced medical care, including gene therapy and iPS cells—while the DoH would provide a general framework.

At the 2013 WMA General Assembly in Fortaleza, a statement regarding individual compensation was removed based on opinions expressed from African countries. In addition, minor amendments were accepted regarding the necessity of not preventing the activities of local researchers. The overall revision proposal was then approved. At the same time, the database working group was strengthened, with the JMA joining this group also.

The General Assembly also adopted other resolutions regarding the conflict between demands for financial reductions and the advancement of medicine; warnings against various forms of governmental intervention in healthcare; and the definition of homosexuality, etc., as normal variants.

CMAAO activities during the 3rd term

The highlight of CMAAO activities during the 3rd term was the 2013 CMAAO General Assembly in New Delhi. The meeting’s main theme was “Stop child abuse.” Improving the well-being of children in the CMAAO region, which is the world’s population center, is very meaningful for discussing the current situations and futures of children. This issue also has a grave impact on our own society as well as the very future of our planet. The General Assembly participants had a common understanding of this idea. It is the role of physicians to realize the importance of the issue of child abuse and to keep a watchful eye on the lives of children in their local communities. The General Assembly also shared this view amongst participants. The meeting adopted a statement titled the “CMAAO Delhi Resolution on Prevention of Child Abuse” as the consensus of the assembly.

Activities of the JDN

JDN

The JDN, which the WMA approved in October 2010, is the first international platform for young physicians. The network provides a forum for these physicians worldwide to share their experiences, ideas, and passion as they play an active role with a common mission from the perspective of global health.

In Japan, the “Junior Doctors and Medical Students Subcommittee” was established under the JMA Global Health Committee in October 2012. Prof. Yasuhide Nakamura (Graduate School of Human Sciences, Osaka University) chairs the subcommittee and is supported by two other members: Dr. Izumi Maruyama (President of the Japan Primary Care Association) and Dr. Naoki Kondo (Graduate School of Medicine, University of Tokyo). They have worked hard to achieve full cooperation for setting up the JDN subcommittee.

JDN members are physicians who are residents undergoing clinical training before specialist training, and many of JDN representatives from various countries attend WMA General Assemblies. For example, 29 junior doctors and medical students from 11 countries attended the WMA Bangkok General Assembly held in October 2012, and their representatives presented a report at the meeting. Unfortunately, however, there were no JDN member attendees at this General Assembly because the JMA had not yet established a JDN at that time.

In response to the recent worldwide trend, the JMA established the JMA Junior Doctors Network (JMA-JDN), mainly to enable young doctors to attend WMA and CMAAO General Assemblies. During the setting-up period of the JMA-JDN, the members of the “Junior Doctors and Medical Students Subcommittee” took leadership, but subsequently JDN members were actively involved in the decision making process for formulating an action plan and structure for the network. Junior doctors and medical students will take a central role in proactively proposing appropriate recommendations to the JMA and WMA as well.

Participation in international meetings

With the support of the JMA, four junior physicians from the JMA-JDN have had the opportu-

nity to participate in international meetings so far. One member of the JMA-JDN attended the WMA Mid-term Council Meeting in Bali in April 2013, one attended the CMAAO General Assembly in New Delhi in September 2013, and two attended the WMA General Assembly in Fortaleza in October 2013. In addition, several JDN members attended both the Expert Conference on the Revision of the Declaration of Helsinki, held in Tokyo in February 2013, and the Harvard School of Public Health Takemi Program 30th Anniversary Symposium, held in Tokyo in November 2013. The JMA-JDN representative at the CMAAO General Assembly in New Delhi learned about the situation regarding child abuse as well as the complicated socio-economic and cultural backgrounds in each country. The General Assembly also provided a once-in-a-lifetime opportunity for the junior doctor to broaden his/her perspective by experiencing the dancing and food culture of India. Participants at the WMA General Assembly in Fortaleza had the opportunity to discuss medical ethics and other health related issues with junior doctors from around the world at the JDN meetings.

Through these experiences, the JMA-JDN representatives gained an understanding of the social backgrounds of many other countries. At the same time, they felt that the meeting provided a valuable forum for junior doctors worldwide to share their ideas and experiences. However, one regret was the lack of interest amongst Japanese junior doctors in global health activities.

The National Medical Associations with Junior-Doctors-Networks have expressed high expectations for the JMA-JDN to continue to contribute to international activities by participating in these kinds of meetings in the future. Also, in the long-term, the JMA-JDN also needs to build up a stronger relationship and cooperation with JDNs in other countries.

Future outlook for the JMA-JDN

The JMA-JDN has a broad potential capacity and resources. Its philosophy is to “serve as a network of junior doctors and aim to improve public health through medical care, medical science, and health services with a broad perspective and high sense of ethics and mission working with the international community.” This philosophy also expresses the desire of the

JMA-JDN for the network to become a new platform for all young Japanese physicians. Previously, groups for young physicians were only seen in medical specialty societies, medical offices at university hospitals, local regions, and NGOs. However, it is now expected that the JMA-JDN will provide a forum that enables a diverse range of young physicians to break away from these various conventional frameworks and facilitates their activity, based on their own fresh and free ideas.

Many young physicians are overwhelmed by their heavy load of daily duties. Their efforts have been focusing on constantly learning and acquiring specialist knowledge and skills. This is a very important period for their careers as medical professionals. In addition to this training, JMA-JDN provides young physicians with new learning opportunities, such as opportunities for discussing medical ethics and other important health issues with colleagues around the world. By this, they can search for solutions to these issues, learning about and gaining an understanding of diverse social and cultural backgrounds in other countries, releasing policy statements which reflect the opinions of young physicians, and studying abroad. These experiences may help them to learn things that they can only do during this period of their lives. Above all, these are precious opportunities for them to meet fellow junior doctors and mentors throughout the world. Thus, junior doctors with a background in JMA-JDN activities may have huge potential to grow and play an active international role in coming decades.

Based on the concept above, the JMA-JDN launched an Annual Survey Project which aims to clarify the current situations of young physicians in Japan. This project surveys the work and life environments, interests and concerns, and requests of young Japanese physicians. Based on the results of the survey, it may be necessary to develop policy statements which reflect the collective opinion of junior doctors. These kinds of efforts, which seem to have been lacking in the past activities, are some of the best ways to convey their opinions to the world community. The JMA-JDN is also planning to investigate the possibility of creating a support program similar to the Takemi Program at Harvard for young doctors to study abroad.

The JMA-JDN will focus its future activities

on the following three points: consolidating the organizational structure of the network, increasing the visibility of the network, and conducting annual surveys of young physicians. This fundamental platform will enable young physicians in Japan to demonstrate their abilities to the maximum. The JMA-JDN has already hosted a JDN meeting in Tokyo following the WMA Council Meeting held in Tokyo in April 2014. The JMA-JDN will continue to contribute to the activities of the JDN worldwide by participating in international meetings such as the CMAAO and WMA General Assemblies.

Harvard School of Public Health Takemi Program 30th Anniversary

To celebrate the landmark 30th anniversary of the Harvard School of Public Health Takemi Program, commemorative events comprising alumni reunions and lectures were held in Boston and Tokyo during 2013.

For the Boston event, Takemi Program graduates (Takemi Fellows) gathered from around the world. Leaving an especially deep impression was the words of praise for the Takemi Program expressed by Fellows—high appreciation for the luxury provided by the program of being able to study for one or two years with virtually no research restrictions together with multinational research fellows. This experience does not immediately influence career formation; however, it was clear that the program has undoubtedly influenced Fellows in their long career histories. Takemi Program Professor Dr. Michael Reich spoke about the principles of “mutual respect” and “individual freedom” after which he described the role of the Takemi Program as follows: “One premise of the Takemi Program is that, ultimately, it is individuals who create the relationship between the local and the global. The growth of each and every person in the Takemi Program, when they go back to their organization, makes the organization better, and when the organization becomes better, the community becomes better, and when the community becomes better, the country becomes better, and when the country becomes better, the world becomes better. This all starts with each and every individual. One year of studying on the Takemi Program is a luxury. For one year in your life, you have the freedom to study whatever you

want to. How will you grow? That is a very rare year in a person's life. This will make the world a better place.”

What awed me about the Takemi Program is this: There was a health economist from South Korea on the program at the same time as me. He was not a physician. People who do economics come into medical schools to do public health and discuss medical economics there. I learned that such people are here and there. I feel that Japanese physicians have fallen into the habit of interacting only with other physicians. But on the program, it was not like that; there were people with all kinds of backgrounds. There were sociologists and journalists, and they would go and talk about health. I learned that to improve health, medical care gets better by having these kinds of discussions not just among healthcare professionals but also with people in various fields. In that respect, I thought that the people from so-called developing countries were ahead of us.

(Prof. Yasuhide Nakamura)

I went to Harvard University twice, and what struck me was that many different kinds of values are respected equally. For example, there was a researcher who, even though he didn't have a doctorate or even a master's degree, loved research and had written more papers than Japanese professors. He was extremely satisfied with his position. There was also a person who was living a happy life, satisfied with his position, engaging enthusiastically in fieldwork as a lecturer; he didn't need to become a Harvard professor to feel happy. In Japanese universities, on the other hand, one gets the impression that becoming a professor is the only goal. However, I felt that having the depth of character to not be like that would be wonderful. On a personal note, a professor previously in my department told me that he wanted me to fulfill a role of connecting the medical front and the university. People on the frontlines of medical and health activities do not write papers, while researchers in universities who write papers do not know the realities of working in the field. He told me that people who have both skills will be needed in Japan from here on. I am grateful to the Takemi Program for allowing me to strengthen myself for that kind of work.

(Prof. Masamine Jimba)

The requirements of Takemi Fellows are that they participate in seminars once a week and write one high-quality paper during their time in the program. It is entirely up to the individual whether they conduct research at the library or enjoy the intellectual environments provided by Harvard University and related graduate schools (government, education, etc.).

The program for the 30th anniversary commemorative symposium held in Tokyo comprised a keynote speech by Dr. Michael Reich and presentations by five past Takemi Fellows. All members of the Global Health Committee participated in the event in roles such as commentator or chairperson for each of the lectures, which ranged in content from Japan's universal health insurance system, which is world-class; to earthquake/tsunami disasters; maternal and child health; key risk factors for health; and obesity.

The 1980s—when the Takemi Program was established—was a period during which healthcare in Japan achieved certain standards.

Under the concept that the JMA should strengthen ties with the international community, especially developing countries, rather than simply taking pride in Japan's healthcare achievements, the JMA President at that time—Dr. Taro Takemi—took the initiative in seeking a forum in which Japan and other countries could mutually cooperate.

That is to say, perhaps the times have finally caught up with Dr. Taro Takemi's idea today, some 30 years later. Undoubtedly this concept was shared from the beginning by Dr. Michael Reich, who has supported the program throughout its 30-year history.

It is most appropriate and natural that the program is named for Dr. Taro Takemi, an outstanding physician as well as a scientist.

New Developments in Disaster and Emergency Activities

Great East Japan Earthquake

The 2nd report focused on the Great East Japan Earthquake in 2011. Subsequently, the JMAJ—the role of which is to disseminate information about JMA activities to the world—published 14 English articles related to the disaster, and the Disaster Medicine and Public Health Preparedness journal published one earthquake-related English article written chiefly by a JMA officer.

At the above-mentioned Takemi Program 30th Anniversary Symposium held in Tokyo, a presentation was made by Dr. Takashi Nagata, who was actively involved in disaster response efforts beginning immediately after the earthquake occurred. His presentation clarified the flow of JMA activities immediately following the disaster. Below is an excerpt from Dr. Nagata's presentation.

The Great East Japan Earthquake, which struck Japan at 14:46 on March 11, 2011 and affected mainly three prefectures in the Tohoku region—Iwate, Miyagi, and Fukushima—wrought immense damage on local communities. Added to the devastation caused by the earthquake and tsunami, the radiation damage caused by the accident at the Fukushima No.1 Nuclear Power Station, operated by Tokyo Electric Power Co., Inc., resulted in a serious situation. Because virtually no victims sustained the severe traumatic injuries that had been projected for such an earthquake disaster, the national government-designated leaders in disaster medical care, Japan Disaster Medical Assistance Teams (DMATs), were unable to fulfill their role sufficiently before their period of activity ended.

Meanwhile, in response to the many problems immediately after the disaster—400,000 victims living in evacuation centers, postmortem examinations, harmful rumors triggered by radiation damage—the JMA instigated new activities on March 15, 2011 in the form of Japan Medical Association Teams (JMATs), comprising physicians from prefectural medical associations throughout Japan. In the four months up until July 15, approximately 1,400 JMATs comprising approximately 9,000 medical professionals were engaged in relief activities and were able to contribute to the disaster response in disaster-stricken communities.

After July 15, the JMA also continued to cooperate with prefectural medical associations in promoting preparedness for responding to disaster scenarios anticipated for an earthquake occurring directly beneath the Tokyo metropolitan area, which the Japanese Government predicts will cause tremendous damage, or a massive Tokai, Tonankai, or Nankai earthquake. JMATs are central to these response efforts.

There tends to be a misconception that JMATs suddenly surfaced in response to the Great East

Japan Earthquake. However, the JMAT concept itself was proposed in the 2009 JMA Emergency and Disaster Medicine Management Committee Report. Established in 2009, the JMA Disaster Management Subcommittee gradually hammered out the JMAT concept while carrying out discussions with Japanese experts on disaster medicine regarding the disaster medicine it would be possible for the JMA and prefectural medical associations to perform.

The springboard for the JMAT concept was the United States' natural disaster response measures. In 2005, the United States was devastated by Hurricane Katrina. In New Orleans, which Hurricane Katrina tore through, residents who had been too late in evacuating took refuge in appalling evacuation facilities and elderly people were transported to other areas by air force planes.

At that time, disaster medicine in the United States focused on terrorism countermeasures, especially bio-terrorism countermeasures, due to the terrorist attacks on the World Trade Center and the anthrax incident. In contrast, preparedness for responding to a humanitarian disaster that leaves huge numbers of victims and generates public health problems was insufficient. Conventional disaster medicine was premised on there being a large number of injured or sick victims (situations such as car accidents in which a large number of people are injured), and triage, trauma care, and transportation were emphasized. Conversely, humanitarian crises such as evacuation center problems were not emphasized in developed countries. A huge paradigm shift in disaster medicine was required.

In considering the form that JMATs should take, something else that was used as a reference was the efforts of regional medical associations in Japan when disasters have occurred domestically in the past. Requests have been made to prefectural medical associations and surveys conducted of their disaster response reports. Of these, the detailed report of activities conducted in the wake of the Great Hanshin-Awaji Earthquake of 1995 that was compiled by the Hyogo Prefectural Medical Association and the Kobe Medical Association became the archetype for JMAT activities. In the Hanshin-Awaji earthquake disaster, the focus was on trauma patients and crush syndrome. However, there were also huge problems with evacuation centers and postmortem

examinations, and the activities of local medical associations drew attention. Furthermore, the surveys enabled us to know about the important role that local medical associations played in disaster response. When a Japan Airlines B-747 crashed on Mt. Osutaka in 1985, the Gunma Medical Association took the central role in performing postmortem examinations. When the Unzen Volcano (Mt. Fugen) in Nagasaki Prefecture erupted in 1991, local medical associations took the central role in treating people who were injured. In this way, it became clear that there is a close relationship between community health and disaster medicine. Based on these experiences, JMATs dispatched to disaster zones make sure that they carry out their activities under the direction of the local medical association, which takes the lead in community health and acts as the final medical stronghold. This has consequently enabled the implementation of JMAT activities in disaster zones to go smoothly.

Economic losses caused by climate change and disasters are increasing year by year. In future, disaster medicine needs to be positioned as a central field of healthcare. In doing so, disaster medicine will need to be based on public health, global health, and community health.

Collaboration with the Japan Self-Defense Forces in the Philippines' Disaster Zone

Super Typhoon Haiyan struck the Philippines on November 9, 2013, causing immense damage. From November 12, three days after the typhoon, the Association of Medical Doctors of Asia (AMDA) began dispatching coordinators and nurses to the disaster zone to provide emergency medical services for the victims. This was the first time a medical team had been sent from Japan to this area. The disaster zone covered the "Typhoon Road" islands: Leyte, Samar, Cebu, and Negros. There were three important issues to be resolved in order for the AMDA teams to be able to carry out rescue activities: medical licenses, safety, and transportation. The Philippine Government does not allow physicians with overseas medical licenses to practice medicine in the Philippines. On the swift decision of JMA President Dr. Yoshitake Yokokura and Executive Board Member Dr. Masami Ishii, JMA sent relief funds to ADMA on behalf of the JMA, while the activities of the Philippine Medical

Association and Japan's Self Defense Forces were coordinated. The Philippine Medical Association helped AMDA to resolve the medical license problem. Joint relief activities were carried out by medical teams from various member organizations of the Asia Sogo-Fujo Network for Emergency Relief (Secretariat: AMDA), which was launched on April 15, 2013; medical teams from various national branches of AMDA; and navy-related medical teams working together with local medical associations of the Philippines Medical Association. These activities were the largest-scale collaborative efforts by multinational medical teams since the rescue activities in the wake of the 2004 Sumatra Earthquake and Tsunami. Furthermore, the International Conference on Yolanda/Haiyan Reconstruction was held in Manila on March 8, 2014.

Disaster medicine and emergency medicine are decisively different. Emergency medicine is aimed at a small number of patients and can be provided in a normal and stable healthcare environment. In contrast, in disaster medicine, a small number of medical staff must treat an overwhelmingly large number of casualties in unpredictable and diverse environments. The role played by medical staff in affected areas comprises 20% of disaster medicine; the roles played by others comprise 80%. For emergency medicine, this ratio is reversed. The most important issue is to ensure the safety of aid stations for relief activities, followed by the transportation of patients to aid stations, and communications among those involved in rescue activities. Only after these three requirements are met and appropriate human and other resources have been secured can medical services begin. The disaster zone in this case comprised several islands. Safety and transportation were secured with the assistance of the Philippine Navy; communications were supported by mobile telephones; medical supplies and living support goods were procured in Manila; aid stations were set up in health centers in local villages; health committee volunteers brought patients to the aid stations; and home visits were carried out. The Philippine Navy acted as bodyguards to protect the rescue teams amidst deteriorated public security. The Japan Self-Defense Forces, which withdrew at the end of the year, demonstrated their important role in crisis management, as the following case example shows.

This is a case example of activities from 1994, when the JMA coordinated with the Japan Self-Defense Forces, which had dispatched relief teams for the first time to the city of Goma in Zaire as part of Rwandan refugee relief activities. A large number of militiamen with weapons were mixed in amongst the refugees. Polluted water from Lake Kivu, which was used for drinking and cooking, was a main cause of problems, with more than 100 people dying from Cholera each day. The “Goma bathtub” provided by the Japan Self-Defense Forces was very popular for washing away the stench of death. The AMDA medical teams dispatched translators not only to the refugee camp but also to the Goma Civic Hospital for surgical operations performed by Japan Self-Defense Forces medical teams. As part of crisis management measures, AMDA and Japan Self-Defense Forces personnel synchronized their wireless frequencies. However, one day members of the AMDA medical team were attacked by refugees in the refugee camp. A small yet heavily-armed company of Defense Forces personnel immediately rushed to rescue them and the AMDA team members were saved. It was later revealed that the reason for the attack was that the car the AMDA medical team had borrowed had been stolen, and the original owner (a refugee) had been trying to retrieve his stolen vehicle. Even after this incident, medical activities continued with the close cooperation of the Japan Self-Defense Forces. At the time of the incident, a member of the Japanese opposition party questioned Japan’s dispatch of Self-Defense Forces overseas, saying, “Rescue is not part of the duties of Self-Defense Forces stationed overseas.” The government’s response was, “They transport victims, not rescue them.” Awareness about the presence and roles of the Japan Self-Defense Forces at that time seems somehow behind the times.

In the aftermath of the Great East Japan Earthquake, the Self-Defense Forces, JMA, and Japanese Red Cross Society also worked hard as the “Big Three” of disaster medicine in Japan. The next step is overseas disaster medical support, the basic concept of which is to carry out the mission of “open and mutual assistance.” Many years ago, the CMAAO health network was proposed by former JMA President Dr. Taro Takemi. It is a comprehensive concept and still holds tremendous potential for ensuring both

the safety of activity sites and transportation as well as medical licenses and medical staff in this region with the support of military forces in various countries. The JMA, which incorporated Dr. Takemi’s philosophy of “Professional Freedom and Noblesse Oblige” into its principles, has made much of this philosophy in regard to disaster medicine activities a reality. What action, then, should the JMA take in order to “help and save lives; never forsake a patient” with regard to people in the Asian-Pacific region? The relief activities carried out in the Philippines in the wake of Super Typhoon Haiyan provide a good opportunity to demonstrate this spirit. Furthermore, based on the sister-city relationship between Tacloban on the typhoon-devastated island of Leyte and Fukuyama City in Hiroshima Prefecture, the Fukuyama Medical Association dispatched a medical team to the disaster affected areas in collaboration with AMDA. The Mayor of Tacloban and the Tacloban Medical Association extremely appreciated this action. When you encounter a fateful difficulty, who will come to help you? Who are your true friends? Disaster medicine is also diplomacy of the heart. These relief efforts were an epoch-making first step in local government medical diplomacy. Expectations are growing for the JMA to take the initiative in formulating a model for the disaster medicine required by Japan, other Asian countries/regions, and the entire world in the 21st century.

Conclusion

The theme proposed by the JMA President for the 3rd term was “International contributions centered on WMA activities and community health.” During this period, the JMA made great contributions globally as part of its WMA activities through the revision of the DoH. In addition, the JMA participated actively in discussions at the CMAAO General Assembly on the theme of child abuse. Moreover, the JMA-JDN was also launched, and junior doctors were able to attend both WMA and CMAAO meetings, providing good opportunities for them to gain invaluable experiences. The Global Health Committee published some 14 articles in the JMAJ, proactively transmitting information to the world. International contributions centered on AMDA activities cannot be overlooked either,

and we hope that these activities will continue in the future.

What, then, is the contribution of the international activities mentioned above to community health in Japan, a question proposed by the JMA President? Further discussion on this question may be necessary. For example, how is the DoH related to improvements in community health? To what extent are discussions on big health data and advanced medicine at international conferences relevant to community health? What kind of influence does the “CMAAO Delhi Resolution on Prevention of Child Abuse” have on future community health? In summary, how best to incorporate themes discussed at international meeting into community health activities is an important issue that requires addressing in the future.

The issue of the maldistribution of physicians in different regions was brought up for discussion in committee meetings several times. The issue of medical interpreters for foreigners was also raised. What hints can global health provide for such important issues faced in community health, and what solutions can it bring about? Another step towards future efforts may be

required.

Finally, based on the discussion above, we would like to propose the following recommendations.

1. Contributing to community health through global health

Several specific examples were given with regard to the Great East Japan Earthquake. Global health contributions should be pursued for community health even in times of peace.

2. International contributions of the JMA and JMA-JDN in WMA and CMAAO

Following earnest discussions about the DoH, the WMA and CMAAO are continuing to discuss global health issues. In future, expectations will further increase regarding the international contributions of the JMA, including the JMA-JDN.

3. Enhancement of information transmission capacity

Using not only the current publications (JMAJ and domestic journals), but also other media, the JMA should enhance its capacity to transmit information regarding successful cases of community health and the contributions of global health to community health.

Members of the JMA Global Health Committee (2012-2014)

Chair

Masamine JIMBA Department of Community and Global Health,
Graduate School of Medicine, The University of Tokyo

Vice-Chair

Keiji TAKEMURA Vice-President of the Nara Medical Association

Members

Akira AKAGAMI Auditor, Tokyo Medical Association (from July 23, 2013)
Shigehito ISHIGURO Executive Board Member, Kochi Medical Association
Tutomu KIKUCHI Board Member, Ishikawa Medical Association
Yoshihiko KUBOTA Board Member, Yamanashi Medical Association
Hideaki KURAMASU Board Member, Hokkaido Medical Association
Naoki KONDO Associate Professor, Department of Health and Social Behavior,
School of Public Health, The University of Tokyo
Mitsuko SHIMIZU Past Auditor, Tokyo Medical Association (up to July 22, 2013)
Shigeru SUGANAMI President, Association of Medical Doctors of Asia (AMDA)
Yasuhide NAKAMURA Professor, Graduate School of Human Sciences, Osaka University
Takashi NAGATA Assistant Professor, Department of Advanced Medical Initiatives,
Faculty of Medical Sciences, Kyushu University (from April 23, 2013)
Sho HASHIMOTO Executive Board Member, Miyagi Medical Association
Masayuki HATAE Board Member, Kagoshima Medical Association
Taro YAMAMOTO Professor, Department of International Health,
Institute of Tropical Medicine, Nagasaki University

Sub-committee for Junior Doctors and Medical Students

Izumi MARUYAMA President, The Japan Primary Care Association

Observers

Kazushi YAMAUCHI Director, Office of International Cooperation,
Ministry of Health, Labour and Welfare
Shiro KONUMA Director, Global Health Policy Division, International Cooperation Bureau,
Ministry of Foreign Affairs (up to February 23, 2014)
Hiroyuki YAMAYA Director, Global Health Policy Division, International Cooperation Bureau,
Ministry of Foreign Affairs (from February 24, 2014)

Efforts of the Japan Medical Association toward the Resolution of Vaccine Gaps*1

JMAJ 57(3): 135-138, 2014

Takashi KOMORI¹

The influenza A/H1N2 subtype prevalent worldwide in 2009 engendered global confusion at that time, but the mortality rate remained extremely low in Japan in comparison with other countries worldwide, thanks to the cooperation of numerous health professionals and citizens of this

country (Fig. 1). It seems that relevant background situations included high awareness of public health and hygiene among Japanese people, with good accessibility to and the high level of health care services in Japan and dedicated efforts of health professionals in providing

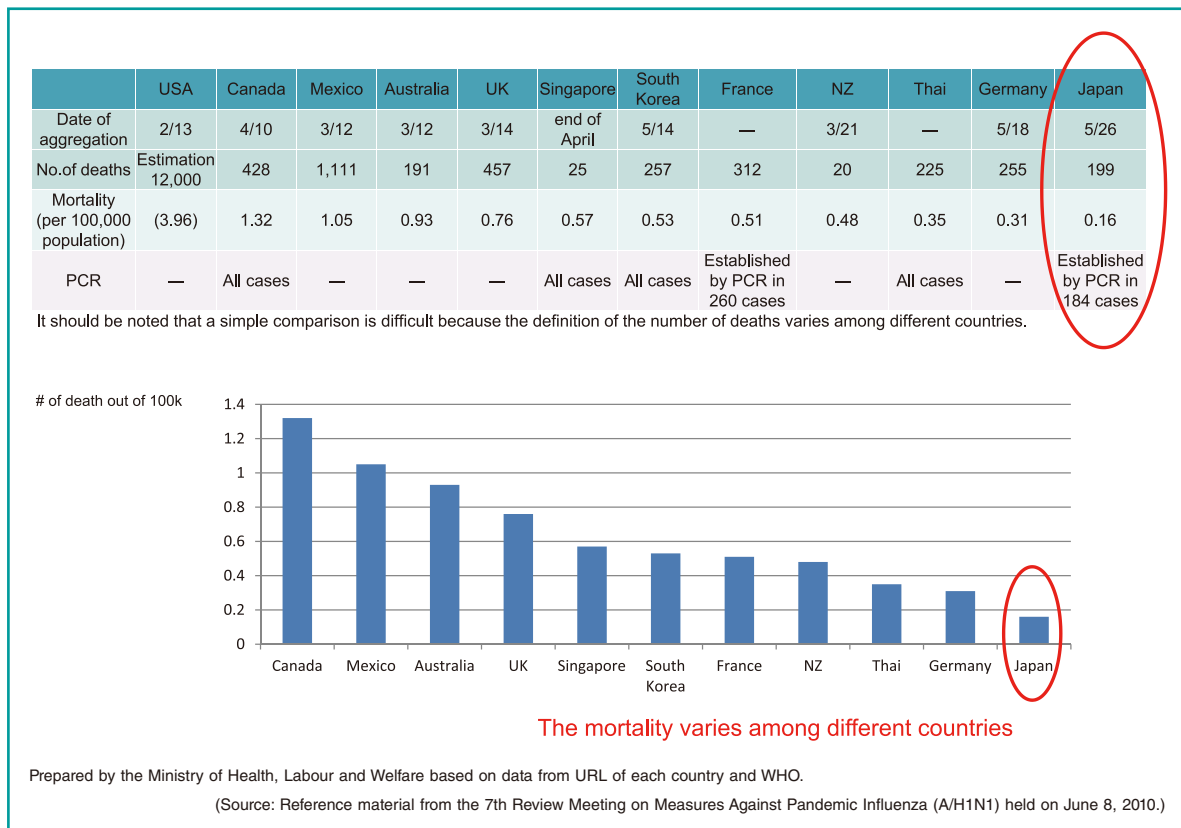


Fig. 1 Comparison of influenza (H1N1) mortality in various countries in 2009

*1 This article is based on the presentation made at the JMA-PhRMA Joint Symposium “How should we operate the vaccination for resolving the issues on Vaccine Gaps?” held on May 21, 2014.

¹ Executive Board Member, Japan Medical Association, Tokyo, Japan (jmaintl@po.med.or.jp).



Photo 1 Poster to promote vaccination among children “Child Vaccination Week March 1 to 7” from JMA, MHLW and Japan Pediatric Association

patients with anti-influenza drugs virtually within 48 hours of onset.

The Japan Medical Association (JMA) has formulated “Children’s Vaccination Week” as the first week of March every year since 2003, providing counseling about vaccination at local medical facilities collaborating with the local medical associations (Photo 1). The local medical associations have also prepared a system to provide the opportunity to receive vaccinations on a Saturday or Sunday or during evening hours to people who cannot come during usual office hours, and has also been continuing educational activities by means of training sessions aimed at vaccination facilities and the general public.

In 2010, JMA produced an enlightening TV commercial and aired it as part of their activities toward resolving the issue of vaccine gaps. This TV commercial aimed to facilitate the national government providing seven vaccines including human influenza type B (Hib), pediatric pneumococcus, varicella, and adult pneumococcus vaccines, making them routine, because these remain voluntary vaccinations in Japan in contrast to other countries where they are given routinely. Our sincere message that we want to protect the people of Japan including children, was contained in this work.

The JMA began to launch a signature-

collecting campaign to demand the enhancement of routine vaccination in August of the same year. We have undertaken a series of activities including airing TV commercials and providing open lectures for the public. Thereafter, the JMA resumed the signature-collecting campaign to demand routine vaccination with the above vaccines in January 2013 in parallel with deliberation on a bill to amend the Preventive Vaccination Act.

During a short period of just one month, the JMA collected signatures from more than 1,600,000 people, and submitted a written demand to the Minister of Health, Labour and Welfare under the name of Yoshitake Yokokura, President of the JMA. The demand of citizens and our organization came to fruition, i.e., the amended Preventive Vaccination Act was enacted on April 1, 2013, making Hib, pediatric pneumococcus, and human papilloma virus (HPV) vaccines became routine. Two of the remaining four vaccines, i.e., varicella vaccine and adult pneumococcus vaccine, were scheduled to become routine starting in October of 2014.

In 2009, a new type of influenza became prevalent worldwide. However, the mortality rate in Japan was lowest in the world, because of the rapid response and high awareness of public health and hygiene in this country.

How to Solve the Revenue Shortage Problem

On the other hand, the issue of revenue shortage for promoting enhancement of vaccination has been pointed out. In Japan, routine vaccinations are carried out by municipal governments. Therefore, the financial burden imposed on municipalities rises as the need for and number of routine vaccines increase and the implementation of vaccinations may itself be disturbed. In fact, all seven types of vaccines were not made routine at one time despite our longstanding demand. Three types of vaccines above which were considered to be of higher priority, preceded the other four.

Vaccination serves as means of safety assurance during peacetime, and therefore, it is desirable that vaccination be implemented by the national government with responsibility under a system in which the vulnerable people are protected by entire population of Japan. The JMA

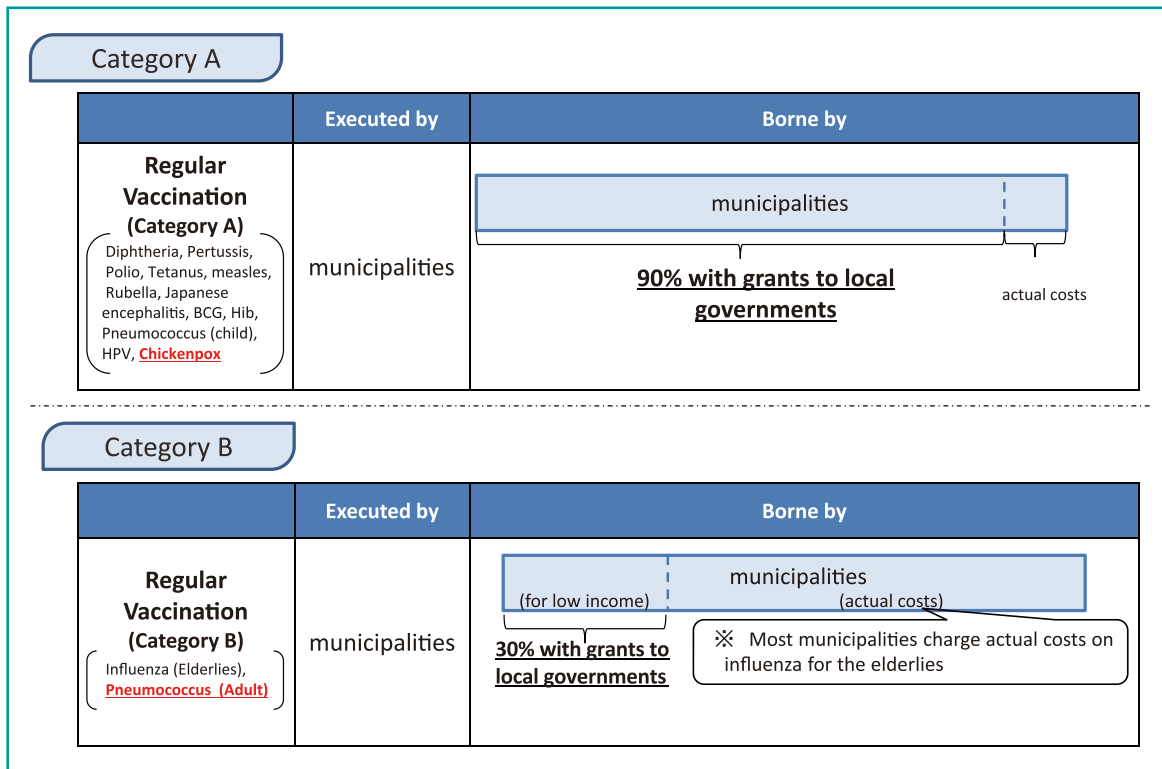


Fig. 2 Costs of regular vaccination (after the 2013 revision of Preventive Vaccination Act)

has been requesting that the national government agree to this claim. As a result, the amended Preventive Vaccination Act achieved 90% coverage of the vaccination cost for Category A diseases*² utilizing public expenditures by means of ordinary tax allocation, the same extent of coverage as for the HPV vaccination project (Fig. 2).

Many municipalities have limited financial resources and are facing difficulty in continuing vaccination projects according to their financial conditions, and disparities among municipalities have been pointed out. Although the financial issue has rarely been highlighted, finance is considered to be an extremely important issue from the aspect of resolving vaccine gaps. This fiscal move by the national government should be appreciated in that it assured a stable financial resource as the government's responsi-

bility, in addition to the correction of disparities among municipalities, although problems awaiting resolution remain, such as the need to give consideration to bodies that do not receive tax allocations.

Future Tasks for Resolving Vaccine Gaps

Tasks to achieve the resolution of vaccine gaps may include spreading correct response and knowledge about rare, but certainly present, adverse reactions to vaccination, and decreasing mislead by information on the Internet, which can be either useful or useless, or by other data sources. To resolve the current vaccine gaps and to enhance the system to protect people from infectious diseases, it is necessary to take educational activities to widely diffuse the proper

*² In Preventive Vaccination Act of Japan, Category A diseases are diphtheria, pertussis, tetanus, polio, measles, rubella, Japanese encephalitis, TB, Hib, pediatric pneumococcus, human papilloma virus (HPV) and chickenpox. The vaccination for these diseases which is on a voluntary basis aims at preventing mass infection and critical diseases.

knowledge of the effect and need of vaccination over people in Japan. For this purpose, it is important for the national government, local governments, health professionals, and the media to send accurate and easily understandable information and to develop effective public relations activities in a unified and coordinated manner. Transparency of information and the fulfillment of accountability represent a first step

toward the resolution of vaccine gaps.

JMA further intends to deepen the discussion with people and continue to ask ourselves what we can do to accomplish our mission from the viewpoint of preventing the spread of infectious diseases and protect people's lives from vaccine-preventable diseases (VPD), i.e., infectious diseases for which an effective preventive vaccine exists.

Regulatory Organizations for Physicians' Status and Administrative Sanctions on Physicians

—Examining the Framework of Government Administrative Systems for Physicians in Japan Based on a Questionnaire Survey Conducted on 13 National Medical Associations—

JMAJ 57(3): 139-145, 2014

Yasuhiko MORIOKA,¹ Norio HIGUCHI,² Tatsuo KUROYANAGI,³ Jiro NUDESHIMA⁴

Abstract

Society bestows professional privilege on physicians. At the same time, it expects physicians to strive constantly to improve their ethics and quality in medical expertise. In every nation, some level of government is responsible for certifying or licensing physicians and imposes strict management, including revoking licenses from inappropriate physicians or providing severe sanctions for misconduct or conduct unbecoming of a physician. In reality, however, it is difficult to reduce the number of inappropriate or indiscreet physicians, and each nation faces its own challenges. We conducted a questionnaire survey of 13 national medical associations, including some major Western countries, regarding the licensing of physicians, the organizations managing their medical practice status, and the data and grounds for administrative sanctioning of physicians. We then examined the circumstances in Japan based on the survey results and pointed out the domestic issues.

Key words Physician's license and management organization, Administrative sanctions, Global situation

Introduction

Physicians are granted various privileges because medical practice directly impacts the life of patients. At the same time, great emphasis has been placed on physician quality improvement and the importance of ethical discipline. Professional associations have rules and measures for these purposes, and many rules and guidelines are provided by administrative authorities. Although an individual physician's ethical awareness and self-discipline is essential, sometimes a human can engage in misconduct or inappropriate conduct because of laziness, spontaneous impulse, or casual carelessness. Therefore, regulation by professional organizations such as medical associations, academic societies, and administrative

authorities is important. For years, we have examined the measures to be taken to govern physicians by focusing on the activities of the Japan Medical Association (JMA) Committee for Ethics and Quality Improvement of Members, with a particular emphasis on continuing ethical education as well as government administrative frameworks for managing physicians' medical practice status. In our activities, we have consistently pointed out that the government management of physicians in Japan has many problems compared to other nations.

Recently, we conducted a questionnaire survey of 13 national medical associations that belong to the World Medical Association (WMA) including some major Western countries, through the JMA International Affairs Division. The survey con-

¹ Professor Emeritus, The University of Tokyo; Advisor, Japan Medical Association, Tokyo, Japan (jmaintl@po.med.or.jp).

² Professor of Graduate Schools for Law and Politics, The University of Tokyo, Tokyo, Japan.

³ Legal Advisor, Japan Medical Association, Tokyo, Japan.

⁴ Research Fellow, Tokyo Foundation, Tokyo, Japan.

Table 1 Organizations for regulating sanctions of inappropriate physicians, physicians with misconduct, and license renewal by countries

Countries	Agency for monitoring physicians	Punishment body/Final decision	Renewal program
1. Brazil	Federal Council on Medicine	Regional Council on Medicine	–
2. Canada	Provincial College of Physicians & Surgeons	Provincial College of Physicians & Surgeons	+
3. Denmark	Danish National Board of Health	Danish National Board of Health	–
4. France	Conseil National de l'Ordre des Medecins	Regional Medical Council Disciplinary Chamber/French Council Disciplinary Chamber	–
5. Germany	State Ministry of Health	① Landesärztekammer (State Medical Association) ② Disziplinarverfahren (Professional Court Proceedings) ③ Criminal Proceedings	–
6. Israel	Ministry of Health	Ministry of Health	–
7. Korea	Ministry of Health and Welfare	Ministry of Health and Welfare	–
8. Singapore	Medical Council	Complaints Committee in MC Disciplinary Tribunal in MC	+
9. South Africa	Health Professions Council	Medical and Dental Board of Health Professions Council/ Appeals Committee of the Council	+
10. Taiwan	Ministry of Health	Committee on the Discipline of Physicians in the Ministry of Health	+
11. Thailand	Medical Council	Subcommittee of MC/Board of the Medical Council	–
12. UK	General Medical Council (GMC)	Medical Practitioners Tribunal Service	+
13. USA	State Medical Board	State Medical Board	+
14. Japan	Ministry of Health, Labor and Welfare	Medical Ethics Council	–

cerned the following 5 topics: (1) organizations in charge of physician's license management; (2) whether the license is permanent (or needs to be renewed); (3) organizations in charge of sanctioning physicians showing misconduct or inappropriate physicians; (4) the number of physicians sanctioned and the details of their sanctions; and (5) the main reasons for sanction. We also reevaluated the issues of the management system in Japan according to the survey results.

Organizations in charge of managing physicians' licenses and medical practice status (Table 1)

Due to the social importance of the medical profession, nations across the world have currently adopted a national licensing system for

physicians, and many countries have a national examination or an equivalent assessment that must be passed to acquire a physician's license. Therefore, we can say that physicians' licenses are strictly managed on the national government's responsibility. The exact organization in charge of managing the license varies among countries; it may be a government ministry/agency or statutory body. Overall, there are 3 types of regulatory organizations: (1) a government ministry or agency, as seen in Japan, Korea, Taiwan, Thailand, Singapore, Israel, and Brazil; (2) a public institution independent of but designated by government ministries/agencies, as seen in the United Kingdom, some states in the US, and South Africa; and (3) a medical association or other physician organization with com-

pulsory membership, as seen in France, Germany, and Canada. Each type has its own advantages and disadvantages, and we cannot hastily conclude which type is the best. Type 1 appears to be common in countries with a relatively small population size, with the exception of Japan. The typical examples of Type 2 are the state licensing boards in the US and the General Medical Council (GMC) of the UK. In Type 2, the attitudes of non-physicians, namely the general public and patients, are valued in monitoring physician conduct. The GMC in particular deals with a wide range of subjects in medicine and medical care, such as the health care system and medical education. Type 3 applies only to the countries that have medical associations or physician organizations in which membership is compulsory for all physicians. The purpose of establishing such organizations is not only to guarantee the status of physicians, but to nurture physicians' ethical self-regulation and discipline. They may look more like an organization for managing physician status. In these countries, monitoring and cleaning among physicians are expected to contribute to physicians' ethics and to quality improvement.

Renewal systems of physicians' licenses (Table 1)

About half of the surveyed countries, including the US and Canada, have adopted a renewal system for physicians' licenses; however, there is no similar system in nations such as Germany, France and Japan. The UK adopted a renewal system very recently. Renewing physicians are obligated to complete certain training within the renewal period, which is expected to improve their clinical skills. However, such renewal procedures require efforts from physicians, and some question their efficacy compared to the amount of effort. Many countries refer to this as one reason for their reluctance to adopt a renewal system.

Organizations for regulating sanctions of inappropriate physicians and physicians with misconduct (Table 1)

Each nation has strict sanctions for inappropriate physicians and physicians with misconduct. The details of sanctions are typically decided by the aforementioned regulatory organization in each nation; however, the actual procedure

can vary among nations. Many countries adopt a system in which an initial sanction is followed by review with a possibility of appeal. Some countries have more complicated systems. In Germany, for example, only the state government has the authority to grant, suspend, and revoke a physician's license in principle. But in exceptional cases, a criminal court can also suspend or revoke a license. Furthermore, Germany has a compulsory medical association for physicians, *Landesärztekammer*, and its internal board has the final authority to punish the members. The review of severe sanctions, however, is in principle entrusted to a special occupational court, *Berufsgerichtliche Verfahren*, consisting of physicians and a judge. The German system is quite complicated because insurance doctors (doctors working under the health insurance program) are also subject to their sanction. In the UK, an independent adjudication organization called the Medical Practitioners Tribunal Service was recently launched to take charge of administrative sanctioning of physicians.

Number of sanctioned physicians and the details of sanctions in a recent year (Table 2)

Each nation presumably has a very strict attitude when dealing with administrative sanctioning of physicians. Unfortunately, some countries do not have statistics on the total number of sanctioned physicians, so we were only able to obtain answers from 21 of 23 respondents. One clearly noticeable statistic is the large number of sanctioned physicians in the US. Of course, the number varies among the states, and some states have figures much lower than others. Nevertheless, the number observed in the US as a whole is exceptionally large compared to other countries. In that respect, the proportion of the sanctioned physicians to the total number of licensed physicians is much lower in Japan and Thailand. We cannot easily conclude whether this is because the regulatory system is too soft or because few physicians commit misconduct in those countries.

Grounds for physician sanction (Table 3)

The top 4 grounds for sanctioning physicians in Japan are: (1) committing indecent acts; (2) causing death or injury through professional negligence (medical errors/negligence); (3) submitting false claims for medical fee payments;

Table 2 Details of sanctioned physicians and the details of sanctions

Countries	Year	Total No. of physicians	Details of sanction					Restriction/ Total physicians
			Restriction of license	Revocation Suspension	Reprimand	Fine	Others	
1. Brazil	2012	377,561	No data					
2. Canada*	2000-2009	69,700 active (2010)	Total for 10 years from 2000 382	Revocation 89 Suspension 293	273	416	446	382/69,700/ 10 years 0.05%
3. Denmark	2012	26,238	61	Rare			61/26,238 0.2%	
4. France	2012	271,970	154	24 130	163	112	154/271,970 0.05%	
5. Germany	2011	449,409	No data					
6. Israel	2011	34,657 23,500 active	No data					
7. Korea	2012	84,544	355	13 342	76		355/84,544 0.4%	
8. Singapore	2011	10,057	15	0 15	23	20	15/10,057 0.1%	
9. South Africa	2012	39,912	18	1 17	12	67	18/39,912 0.04%	
10. Taiwan	2012	42,310 active	No data					
11. Thailand	2011	43,408	2	1 1	17		2/43,408 0.004%	
12. UK	2011	245,918	158	65 93	16	24	158/245,918 0.06%	
13. USA**	2011	834,769 active	3,228	1,905 1,323		1,768	3,228/834,769 0.3%	
14. Japan	2012	295,049	52	8 44	6		52/295,049 0.01%	

The figures listed in this table except for Canada and the US are basically copied from the answer sheets to the questionnaire collected from each NMA.

*The data for Canada except for the total number of physicians are cited from "The characteristics of physicians disciplined by professional colleges in Canada" by Asim Alam, et al., *Open Medicine* Vol.5, No.4, 2011.

**Based on the figures shown in "the Federation of State Medical Boards, Summary of 2011 Board Actions", the data for the US are arranged by the editorial board of the *JMA Journal* to fit this table.

and (4) causing death or injury through personal negligence (traffic accidents and driving violations). In this survey, we asked the respondents to list 5 main grounds. The responses suggest that the grounds for sanction vary considerably among countries, which may reflect the social situations or culture of each country. Nevertheless, we noticed some useful insights.

The first notable finding is that pecuniary reasons (e.g., false claims of medical fee payments, tax evasion, fraud, forgery of documents such as medical certificates, and bribery) are common. There are no nationwide statistics on the grounds for physician sanction in the US. In some states, however, tax law violations and

insurance reimbursement fraud are prominent. This suggests that humans are vulnerable to pecuniary temptation, and that physicians are no exception. Physicians often do not consider the forgery of documents, whether intentional or not, to be a crime. Therefore, it is extremely difficult to eradicate this type of misconduct. The number of physicians sanctioned for submitting false claims of medical fee payments has remained relatively stable over time in Japan as well. False claims appear to be a major problem in countries that have an extensive nationwide public health insurance system, and thus poses a challenge for those countries. However, some countries with nationwide public insurance sys-

Table 3 Grounds for physician sanction

Countries	Description
1. Brazil	No data
2. Canada	<ul style="list-style-type: none"> ① Sexual misconduct ② Failure to meet a standard of care ③ Unprofessional conduct ④ Fraudulent behavior ⑤ Inappropriate prescribing
3. Denmark	<ul style="list-style-type: none"> ① Failure to comply with regulations of the National Board of Health on medication ② Failure to comply with other regulation ③ Failure to comply with regulations on medical records ④ Having received three reprimands on malpractice from an independent board on complaints will result in the publication of the name of the doctor on website.
4. France	<ul style="list-style-type: none"> ① Confraternity ② Conscientious care ③ Certificates ④ Duties or behaviours towards patients ⑤ Advertising
5. Germany	No data
6. Israel	No data
7. Korea	<ul style="list-style-type: none"> ① False claims for medical fee payment ② Practicing under an employer who is unqualified to run a medical institution (by the Medical Law) ③ Advertising without going through a due process of medical advertisement review or making a false or exaggerating advertisement ④ Letting non-medical professionals do medical practices or do medical practices beyond the legally admitted purview ⑤ Issuing prescriptions, medical certificates, death certificates, other certificate without seeing patients in person
8. Singapore	No data
9. South Africa	<ul style="list-style-type: none"> ① Fraudulent claims to medical funders 44% ② Medical negligence 30% ③ Practicing/employing unregistered persons 15% ④ Sexual misconduct 6% ⑤ Breach of confidentiality 5%
10. Taiwan	<ul style="list-style-type: none"> ① False claims for medical fee ② Exaggerated advertisement ③ False medical certificate
11. Thailand	<ul style="list-style-type: none"> ① Practice with poor medical standard ② Indecency ③ False claim for medical fee payment ④ Lack of patient safety ⑤ Issuing false medical certificates
12. UK	<ul style="list-style-type: none"> ① Clinical care ② Relationships with patients (respect) ③ Relationships with patients (communication) ④ Probity—criminal conviction ⑤ Probity—writing reports/documents
13. USA	No data
14. Japan	<ul style="list-style-type: none"> ① Indecency ② Medical errors/negligence ③ False claims for medical fee payment ④ Professional negligence causing injury and death

tems have apparently low rates of false claims; those countries may have circumstances that make it difficult to make a false claim.

In recent years, serious malpractice associated with medical accidents and substandard and incompetent skills are becoming increasingly common reasons for sanction in each nation. Institutional improvement regimes are adopted to address the problem of medical accidents, and continuing education for physicians is being offered more often.

Although it is not directly tied to medical care, personal conduct that relates to the character and dignity of a physician is also subject to sanction in many countries. In Japan, indecency has been the most common reason for sanction for the last 10 years. Indecent acts forced on patients are subject to severe sanction, including revocation of the physician's license. However, more than half of indecent acts are not associated with medical care (prostitution with a minor, peeping photos/videos on public streets, etc.). Such acts are sanctioned by fines or other methods under criminal law before a physician's license or medical practice is restricted. In some cases, the question has been raised whether such double sanction is necessary. The UK, Canada, and Thailand listed indecent acts as one of the top reasons for sanction, but there appears to be a gap in the details of sanctioning across countries.

Other grounds for punishment listed in the survey include medical practice by non-licensed persons, exaggerated/misleading advertising, and violations in handling narcotics and psychotropic drugs. These problems seem to be common among the surveyed countries. France is characteristic in that their top reasons for sanction included breaches of professional duty to patients and the interference in professional doctor-to-doctor relationships or family problems. Japan is unique in that many kinds of traffic violations—driving under the influence, driving accidents, or causing death or injury through negligence in traffic accidents—can become grounds for sanction, even though they are not directly related to medicine.

Discussion

As medicine advances and becomes more accessible to the general public, people's expecta-

tations toward medical care is elevated, and the professional ethics of physicians has become increasingly important. Ethics primarily depend on the awareness of each individual physician. Nevertheless, efforts by professional organizations such as medical associations, academic societies, and administrative authorities are also needed. In this paper, we investigated the conditions of 13 surveyed countries with regard to administrative issues, management systems of physicians' medical practice status, and administrative sanctioning of inappropriate physicians and physicians with misconduct or conduct unbecoming of a physician. In light of the survey results, we believe that Japan has the following problems.

First, there are close to 300,000 physicians in Japan, and their licenses and medical practice status are all managed by one bureau in the Ministry of Health, Labour and Welfare. This is quite exceptional in comparison to the other nations' systems of other countries, and the current system needs a reform as we have been pointing out. Under the Medical Practitioners' Act, the Minister of Health, Labour and Welfare is supposed to sanction unfit physicians upon hearing the opinion of the Medical Ethics Council. Such physicians include (1) physicians incapable of performing his/her professional duty due to mental/physical disability; (2) physicians who are addicted to narcotics, marijuana, opium, or other illegal substances; (3) physicians who received civil or criminal punishment that is more serious than a fine; and (4) physicians who have committed a crime or misconduct in his/her medical practice or who have committed conduct unbecoming of a physician. In reality, however, a sanction on anyone who receives punishment more serious than a fine (item 3) is entrusted to the Medical Ethics Council, and is determined solely based on precedent. The Council has a right to conduct its own investigation, but it is rarely exercised in case review; the Council is merely reviewing a case in which facts have been already established and a court ruling has already been made. There is a channel to accept complaints and claims from the public, patients, and medical/healthcare personnel in many countries, and the referred cases are subject to sanction. Such channels have been established in each prefecture in Japan. However, their function has yet to reach their full potential, and there is no particular flow of processing

from accepting a relevant case for review to assessing a sanction.

In addition, the number of sanctioned physicians in Japan is comparatively small globally, and the public in Japan may not regard the problem of inappropriate physicians or physicians' misconduct as a serious issue. Nevertheless, even a small number of offenders can lead to damage people's trust in all physicians. Although the number of sanctioned physicians has remained relatively unchanged for the last 10 years, the regulatory system of physicians' medical practice status requires improvement.

At any rate, as we have discussed, the root of the problem in this nation lies in the fact that a small number of government bureaucrats in one ministry manage the sanctioning of all physicians nationwide. One possibility for reform would be to transfer the authority to license and manage physicians to municipal governments. Alternatively, a medical association with compulsory membership for all physicians can be established, as in France and Germany. Examining these possible measures is an essential challenge in order to improve the physician management system in Japan.

Conclusion

We conducted a questionnaire survey of the national medical associations of 13 countries, including several major Western countries, on the regulation of physicians' licenses, management of physicians' medical practice status, and

administrative sanctioning of physicians, in order to examine the problems in Japan. At present, a large number of physicians in Japan are managed by a small number of bureaucrats in a ministry and agency. We conclude that the current system is inadequate, and that system reform is required to improve care quality and professional ethics among physicians.

Acknowledgments

This paper is based on a questionnaire survey obtained from the 13 national medical associations that are members of the WMA. We express our deepest gratitude for their kind participation. We also thank the staff of the JMA International Affairs Division and General Affairs Division for collecting and organizing the data.

References

1. Morioka Y, Higuchi N, Kuroyanagi T, Nudeshima J, Nijima H. Physician management schools and medical associations and in major countries. *Japan Medical Journal*. 2006;4307:79-82, 4308:79-84, 4311:79-84, 4313:75-79, 2007;4317:76-82. (in Japanese)
2. Morioka Y. Initiation by the government and physicians groups to improve awareness of medical ethics: Challenges in Japan. *Proc Jpn Acad Ser B*. 2012;88:144-151.
3. Morikawa Y. Disciplining of physicians in Japan: actual situations of the last 10 years and towards the reform of punishment system. *Nihon Ishikai Zasshi [J Jpn Med Assoc]*. 2013;141(10): 2258-2474. (in Japanese)
4. Higuchi N. Administrative punishment on physicians in USA: cases in Missouri. *Nihon Ishikai Zasshi [J Jpn Med Assoc]*. 2013; 141(11):2472-2474. (in Japanese)
5. Nudeshima J. Administrative sanction against physicians in France. *Nihon Ishikai Zasshi [J Jpn Med Assoc]*. 2013;141(12): 2690-2693. (in Japanese)

Health Literacy Training for Public Health Nurses in Fukushima: A Case-Study of Program Adaptation, Implementation and Evaluation

JMAJ 57(3): 146-153, 2014

Aya GOTO,¹ Rima E. RUDD,² Alden Yuanhong LAI,³ Hiromi YOSHIDA-KOMIYA⁴

Abstract

Health literacy comprises not only an individual's ability to gain access to, understand and use health information, but also health care providers' ability to make health information accessible and usable. The Fukushima nuclear accident has posed challenges related to the communication of radiation-related health information. Public health nurses are gatekeepers of community health in Japan, and have primary responsibility for communicating this complex information about science and risk to lay members of the community. A health literacy training program was designed to augment communication skills of participating nurses with two primary goals: changing communication practices and norms among public health nurses, and improving access to information for community residents. Training content incorporated an overview of health literacy skills (including numeracy), processes for assessing written materials and visual displays, as well as guidelines for text improvement. The workshop was spread across two days with two-hour sessions each day. A proximal post-training evaluation survey was conducted, followed by a more distal one-month follow-up evaluation to assess the application of learned skills in practice. Twenty-six nurses in Fukushima City attended the first trial. Post-training evaluations were highly positive, with agreement from 85-100% of participants on the appropriateness and usefulness of the workshop. During a one-month follow-up, the nurses reported applying new knowledge and skills to develop written materials. However, they faced difficulties sharing their new skills with colleagues and challenges changing work norms. Participants also encountered difficulties using graphics and explaining risks in practice. This paper highlights the importance of providing health literacy training opportunities for professionals to strengthen health system's ability to accessible information and services. This program also serves as important reference for future disaster management efforts.

Key words Health literacy, Fukushima nuclear accident, Education, Public health nurses

Introduction

According to the World Health Organization,¹ “health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.” Health literacy not only manifests in people's ability to interpret health information, but also extends to preventive

behaviors and health consequences including hospitalization and mortality.² Although the World Health Organization's definition only makes reference to individual skills, a broader concept of health literacy has been emerging³—one that includes attention to health care providers' roles in making health information accessible and understandable [USDHHS, 2010].⁴ The US National Action Plan to Improve Health Literacy delineated goals focused on developing and

¹ Department of Public Health, Fukushima Medical University School of Medicine, Fukushima, Japan (agoto@fmu.ac.jp).

² Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, USA.

³ Formerly, Department of Health Communication, School of Public Health, The University of Tokyo, Tokyo, Japan.

⁴ Gender-Specific Medicine Center, Fukushima Medical University School of Medicine, Fukushima, Japan.

disseminating health information that is accurate, accessible, and actionable.

In Japan and many other nations outside North America, the concept of health literacy has gained attention only in recent years.⁵ A quick search of publications using PubMed with the following search string, “health literacy AND Japan,” yielded 30 hits, with the earliest article dated 2001. Nearly one third of these publications reported the development of new Japanese tools to assess health literacy levels of individuals, while none focused on the provider. Although the scope of health literacy research in Japan has been expanding, its importance surged after the catastrophic Fukushima nuclear accident, as scientists and health care professionals encountered significant challenges to communicate radiation-related health information to the community.

Our recent post-disaster study among public health nurses in Fukushima City delineated how public health nurses’ recognized the responsibilities and needs to improve their communication skills to better transfer scientific knowledge and information to the community.⁶ During parental counseling of mothers, the nurses recorded that mothers were concerned with differences in risk perception among their family members, and asked technical questions that were related to radiation. We further demonstrated that the differences in risk perception within the family were associated with mothers’ depressive symptoms.⁷ These data triangulate to suggest an association between mental health and the degree of understanding of health information in the face of disaster. Thus, improved access to health information may help to alleviate people’s anxiety and concerns in a disaster setting.

Aiming to improve the comprehensiveness of information provided through public health nurses and their community activities in Fukushima City, a health literacy training for nurses was planned, implemented and evaluated. The training was adapted from Rudd’s “Eliminating Barriers-Increasing Access Workshop.”⁸ The training program was designed to help health professionals understand the gap between professional knowledge—including terms and concepts, and the public’s understanding of health and science related information. Studies have documented how the terminologies and scientific concepts health professionals learn from their training are unfamiliar to the general public, and

how these professionals could benefit from health literacy training in order to interact more appropriately with their clients.⁹ Likewise, this workshop was designed to help health professionals recognize and bridge the gap. This case study also illustrates the importance of adaptation rather than adoption. Here, a model developed with a Western perspective was modified in accordance to the cultural and specific needs of a professional group of nurses in Fukushima City. It is hoped that this report can inform future trainings in Fukushima and other disaster settings so that initiatives related to health literacy can be implemented using a culturally sensitive approach.

Methods

A health literacy training model posted online and rigorously piloted in the United States was adapted for use in Fukushima City. Five major components of the training protocol were modified to fit the Japanese public health setting: 1) project organization, 2) intervention tools, 3) practice sessions, 4) piloting, and 5) evaluation and planning for the future. Similar steps were undertaken in a previous study that culturally tailored a Western parenting support program into Japanese and Vietnamese settings.¹⁰

Project organization

The Fukushima Health Literacy program was incorporated into existing information-sharing meetings for public health organized by Department of Public Health and Gender-Specific Medicine Center at Fukushima Medical University. The information-sharing meetings started in 2011 as one of the post-disaster restoration activities,¹¹ and has been conducted regularly since then. The purpose of the meetings is threefold—to improve knowledge and skills with regard to radiation and parenting support, to provide opportunities to share information among peer nurses, and to reduce anxiety and stress. Core project members consisted of one public health nurse and two physicians, who managed the meetings, gave lectures and facilitated discussions. In addition, guest lecturers and graduate students have been invited as facilitators.

Intervention tools

The model program developed by Rudd⁸ was

Table 1 Participants' self-evaluation of achievements toward training objectives in the follow-up survey

Statements	N (%) of 4 and 5 ^a		
	Total (N = 23)	Attended once (N = 13)	Attended twice (N = 9)
Workshop evaluation			
I gained confidence in assessing and revising written materials.	13 (59%)	7 (53%)	6 (67%)
I applied learned skills in practice.	16 (73%)	8 (62%)	8 (89%)
Self-evaluation of achievements			
Knowledge about health literacy			
I can explain health literacy needs.	19 (79%)	12 (92%)	7 (70%)
I can explain definition of health literacy.	9 (38%)	5 (38%)	4 (40%)
I can explain numeracy levels.	6 (26%)	4 (33%)	2 (20%)
I can explain people's health literacy level in Japan.	5 (23%)	3 (27%)	2 (20%)
Skills to assess written materials			
I can use Marker Method.	22 (92%)	12 (92%)	9 (90%)
I can use Obi-2.	8 (35%)	4 (33%)	4 (40%)
I can use SAM.	8 (35%)	4 (33%)	4 (40%)
I can use single-item screening of health literacy level.	7 (30%)	3 (25%)	4 (40%)
Skills to revise written materials			
I can write easy-to-read text.	13 (54%)	7 (54%)	6 (60%)
I can develop a leaflet step-by-step.	8 (33%)	4 (31%)	4 (40%)
I can develop easy-to-understand graphics.	6 (25%)	3 (23%)	3 (30%)
I can explain risk.	2 (8%)	0 (0%)	2 (20%)

^a A five-point Likert scale ranging from 'highly disagree' (1) to 'highly agree' (5) was used, and the numbers in the table are the summated frequencies of 'highly agree' and 'agree.' The total numbers of items do not add up to the numbers indicated in the top row due to missing data.

part of the Health Literacy Studies project at Harvard School of Public Health designed for public health professionals interested in improving health literacy in their practice. The initial focus was on assessing and improving written materials. Major components of the workshop were introductions with ice-breaking activities, an introduction to health literacy, instructions for and hands on experience with assessment tools, review discussions, and training evaluation. The facilitator's guide is published online.⁸

We modified the training content to fit with local context and to incorporate tools appropriate for Japanese language and risk communication issues specific to Fukushima. Firstly, we searched for Japanese tools to assess written materials and individuals' health literacy level. As a substitute of SMOG (Simple Measure of Gobbledygook) to assess readability, we selected a free online tool named Obi-2.¹² The original workshop included Suitability Assessment of

Materials (SAM), a comprehensive assessment tool of written materials. To fulfill this component, a version translated by Noro adapted to Japanese materials was chosen,¹³ and permission was obtained for use in the workshop. We also identified a Japanese version of single-item assessment of health literacy level of patients.¹⁴ Secondly, we searched for guidelines to improve Japanese text and found Sasaki's study to list practical instructions.¹⁵ Thirdly, in order to provide tips for communicating risk information—of particular importance in health communication in Fukushima, we referred to Apter's numeracy levels¹⁶ and Woloshin's guidelines.¹⁷

Other techniques taught in the training (listed in **Table 1**) were: an assessment method asking readers to mark difficult words and phrases ("Marker Method"),¹⁸ instructions to improve graphics,¹⁹ and step-by-step procedures to develop a leaflet.²⁰

Table 2 shows the overall structure of the

Table 2 Content of the health literacy training program in Fukushima City

First session	Second session	Follow-up survey
1. Ice-breaking activity	1. Review quiz	1. Review of one-month application
2. Lecture	2. Lecture	2. Training evaluation
• General background of health literacy	Techniques to improve;	3. Distribute additional information leaflet about tips to apply health literacy in practice
• Instructions to use material assessment tools	• Text	
3. Exercise	• Graphics	
• Assessment of an assigned written health material	• Risk presentation	
4. Training evaluation	3. Exercise	
5. Homework	• Revision of their own materials that they had assessed as homework	
• Assessment of materials that participants themselves developed	4. Training evaluation	
	5. Homework	
	• Apply learned knowledge and skills in practice	

program. A three-day training was initially recommended, but due to the intense work schedules of public health nurses who are continuing to undertake post-disaster restoration activities, the duration was shortened to two days with a follow-up survey. Each session lasted two hours, and a follow-up was conducted one month later. The session structure followed Rudd's original workshop plan, which consisted of lectures, exercises and discussions.

Pilot sessions

Prior to the first trial, two practice sessions were held to concretize the training flow and adequacy of training materials. In both practice sessions, 2-3 graduate students and a teaching staff of Department of Public Health participated. Training materials were revised based on their feedback. In addition, preparatory meetings were held with facilitators.

The first session was conducted in the early fall of 2013 and the second session one month later. The follow-up survey questionnaires, along with additional information leaflets on health literacy, were distributed to all participants a month after the second session. The training took place at Fukushima City Health and Welfare Center. There were 39 nurses working at the center, and all except those assigned to duties during the conduct of the workshop attended.

Evaluation and planning for future

At the end of each session, we asked participants

to fill out a course evaluation form. There were six evaluation indicators related to adequacy of teaching materials, time allocation, facilitation, knowledge gain and practicality of the lecture and exercises. Possible responses were formulated according to a five-point Likert-scale, ranging from "highly disagree" (1) to "highly agree" (5). Similar methods of assessments has been used in our previous studies.¹⁰

In the follow-up survey, we asked participants whether they have gained confidence in assessing and revising materials, applied learned skills in practice, and further assessed their achievements toward 12 specific training goals. Out of which, four items were about basic knowledge of health literacy, four on material assessment, and four on material development. In addition, we asked participants to describe their applications in daily practice, barriers in applying learned skills, what they wanted to learn further, and what they have planned for the city's community health activities. These training goals and additional follow-up questions were developed through discussions between the first author and the workshop developer (the second author).

Quantitative data was analyzed using STATA statistical software, version 10 (Stata Corporation, College Station, TX). Qualitative data was analyzed by the first and third authors by referring to Carey and colleagues' coding and intercoder agreement methods.²¹ A code list was first developed by the first author, and text data

Table 3 Participants' session evaluation at the end of first and second sessions

Statements	N (%) of 4 and 5 ^a	
	First session (N = 15)	Second session (N = 21)
Teaching materials were appropriate.	14 (93%)	21 (100%)
Time allocation was appropriate.	13 (86%)	21 (100%)
Facilitation was appropriate.	15 (100%)	21 (100%)
I gained knowledge about health literacy.	14 (100%) ^b	20 (95%)
What I learned from lecture is useful for health activities.	15 (100%)	21 (100%)
What I learned from discussion is useful for health activities.	15 (100%)	21 (100%)

^a A five-point Likert scale ranging from 'highly disagree' (1) to 'highly agree' (5) was used, and the numbers in the table are the summated frequencies of 'highly agree' and 'agree.'

^b There was one missing answer.

was categorized individually by the two authors independently. The first author then compared the results by calculating agreement proportions. During this process, the number of codes was reduced by combining the ones with similar context to ensure categorizations that were more accurate. Rates of agreement were high, ranging from 80-84%, although it was low (43%) in terms of nurses' planned community health activities. As such, the data set was reviewed carefully, with consensus achieved with the third author subsequently, and the agreement reached 71%. Plans for the future were discussed with chief nurses, facilitators and the workshop developer.

Ethical consideration

The study was conducted in collaboration with the Fukushima City Health and Welfare Center. All data were anonymous in accordance with Ethical Guidelines for Epidemiological Research issued by the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Health, Labour and Welfare. Since anonymous data with no identifiers was used, an ethical review at the Fukushima Medical University was waived.

Results

Seventeen public health nurses attended the first session, and 22 attended the second session. The follow-up materials were distributed to a total 26 nurses, who attended at least one of the training sessions.

Quantitative assessment

Table 3 shows results of session evaluation by participants. Response rates of the first evaluation was 88% (15/17), and 95% (21/22) for the second evaluation. Over 85% of respondents agreed to all statements on the appropriateness and effectiveness of both sessions.

Table 1 shows results of participants' evaluations and self-evaluation of achievements toward training objectives in the one-month follow-up survey. The response rate of this evaluation was 88% (23/26). Fifty-nine percent gained confidence in assessing and revising written materials, and 73% had applied the skills they have learned in practice during the follow-up period. These proportions were higher among those who have attended both sessions. While 79% could explain health literacy needs, 92% could use the Marker Method, and 54% could write easy-to-read text, only 8% could explain risk in their practice.

Qualitative assessment

Table 4 shows the frequencies of codes. The component that received the most number of responses in the follow-up evaluation was the application of learned skills at the individual level, followed by barriers of application. The most common application of learned skills was in the form of health information/education materials. Besides technical issues, nurses voiced difficulties in sharing learned skills and changing work norms, in addition to time and staff constraints. Respondents recognized the need to further learn by practice and through repeated

Table 4 Frequencies of coded answers in the follow-up survey

Codes (Total N of respondents)	N ^a
Application of learned skills (19)	
Applied to health information/education materials	12
Will apply	6
Applied to other written materials	4
Application barriers (15)	
Technical difficulties to improve sentences, tables and graphs	10
Work place difficulties to share learned skills, change work norms, and time and cost constrains	7
Further learning (11)	
Need to continue learning by practicing and attending more training	6
Need to learn more skills in communicating scientific/technical information and verbal/motivational communication	5
Plans for municipal activities (7)	
Apply health literacy skills in health information/education	4
Work with community and different sectors	3

^a Codes were created from the open-ended responses from participants, and intercoder agreement was calculated as part of the analysis.

training.

In the review discussions, facilitators recommended that the training be repeated for city officers in different sectors involved in health promotion activities and in other regions. The city's public health nurses also suggested a plan to organize regular meetings among themselves to reinforce their health literacy knowledge and skills. In order to scale-up the present training, the workshop developer pointed out a need to train additional facilitators.

Discussion

According to a recent report of the Institute of Medicine's roundtable workshop on international health literacy efforts, no educational efforts targeting health professionals has been reported from Japan.²² Our presented case is likely be the first initiative in the country to take a step forward to build health literacy skills of health service providers in order to lessen the burden of community residents when gaining access to the health information they need. The scores for post-session evaluations, and self-evaluations of gained confidence in developing written materials were high. Participants in our workshop learned the importance of health literacy, gained confidence in involving commu-

nity residents using the Marker Method, and have applied the skills they have learned during the follow-up period.

The nurses have, however, raised major barriers in the application of their new competency. Specifically, they were difficulties in the sharing of newly learned skills, and changing of work norms at their workplaces. In the Institute of Medicine report, building capacity of public and health professionals, scientific evidence, and infrastructure were the three components highlighted as part of an inter-sectorial approach to strengthen the presence of health literacy.²² Henning and colleagues further described from a transnational perspective (one case was from Fukushima) how community workers' leadership is enhanced through skills development in combination with professional networking opportunities, and authorization and legitimization of their new tasks in health systems and policies.²³ Simultaneous efforts are thus needed to repeat the training for different sectors and regions that aim at a wider application of health literacy skills, and to involve stakeholders to incorporate initiatives related to health literacy into the health system.

Another issue to be solved was participants' extremely low scores in self-evaluations of their ability to use graphics and explain risks. The

most difficult challenge public health nurses in Fukushima face in the post-disaster phase is to communicate evidence on health risks of radiation exposure.⁶ Public health nurses are not only required to inform on scientific data, but also communicate their interpretations in layman terms.⁶ Among the various types of numerical information, probability and risk have been ranked as the most difficult concepts to understand.¹⁶ Previous reviews and randomized studies have therefore recommend risks or probabilities to be presented in terms of event rates rather than relative risk reduction, and to use pictographs or bar charts.^{24,25} Moreover, a focus group study in linguistics found that people's understanding of literacy and numeracy is interweaved with communication and interpersonal relationships with their service providers.²⁶ Health literacy training for effective risk communication between public health nurses and community is therefore recommended to balance technical and communication skills components.

This was a single trial of health literacy training, describing its planning, implementation and evaluation processes. More rigorous assessments in the long-term with a larger group of participants are needed to confirm the effectiveness of this newly built program. As requested by the nurses, we are planning to repeat the training in various regions in Fukushima. Despite the limitations, we believe that this first trial of a health literacy training launched after the Fukushima nuclear accident shows a practical way toward improving community health services in a challenging post-disaster situation.

Acknowledgments

This work was supported in part by the Japan Foundation for the Promotion of International Medical Research Cooperation (program planning), and the Fukushima Labor and Health Center (program implementation). Preliminary findings of the study were presented at the symposium co-organized by Japan Medical Association Research Institute and Science Council of Japan (February 22, 2014).

References

- World Health Organization, Division of Health Promotion, Education and Communications. Health Promotion Glossary. 1998. <http://www.who.int/healthpromotion/about/HPG/en/>.
- Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Crotty K. Low health literacy and health outcomes: an updated systematic review. *Ann Intern Med*. 2011;155:97-107.
- Rudd RE. Needed action in health literacy. *J Health Psychol*. 2013;18:1004-1010.
- US Department of Health and Human Services, Office of Disease Prevention and Health Promotion. National Action Plan to Improve Health Literacy. 2010. <http://www.health.gov/communication/hlactionplan/>.
- Sørensen K, Van den Broucke S, Fullam J, et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health*. 2012;12:80.
- Goto A, Rudd RE, Lai AY, et al. Leveraging public health nurses for disaster risk communication in Fukushima City: a qualitative analysis of nurses' written records of parenting counseling and peer discussions. *BMC Health Serv Res*. 2014;14:129.
- Goto A, Rudd RE, Bromet EJ, et al. Maternal confidence levels in Fukushima mothers before and after the nuclear power plant disaster in Northeast Japan: a series of cross-sectional studies. *J Commun Healthc*. 2014;7:106-116.
- Rudd RE. Assessing Health Materials: Eliminating Barriers—Increasing Access. 2010. <http://www.hsph.harvard.edu/healthliteracy/>.
- Evans KH, Berecknye S, Yeo G, Hikoyeda N, Tzuang M, Braddock CH 3rd. The impact of a faculty development program in health literacy and ethnogeriatrics. *Acad Med*. 2014; 89:1640-1644.
- Goto A, Suzuki Y, Tsutomi H, et al. The process of adapting an Australian antenatal group-based parenting program to Japanese and Vietnamese public service settings. *Int Electron J Health Educ*. 2012;15:191-202.
- Goto A, Reich MR, Suzuki Y, Tsutomi H, Watanabe E, Yasumura S. Parenting in Fukushima City in the post-disaster period: short-term strategies and long-term perspectives. *Disasters*. 2014;38 (Suppl 2):s179-189.
- Sato S, Matsuyoshi S, Kondoh Y. Automatic assessment of Japanese text readability based on a textbook corpus. LREC-08. 2008. http://kotoba.nuee.nagoya-u.ac.jp/sc/obi2/obi_e.html.
- Noro I. Research on suitability of information for patients: comprehensibility of informed consent document and feeling of safety. Unpublished Doctoral Dissertation. Sendai: Tohoku University; 2009. (in Japanese)
- Tokuda Y, Doba N, Butler JP, Paasche-Orlow MK. Health literacy and physical and psychological wellbeing in Japanese adults. *Patient Educ Couns*. 2009;75:411-417.
- Sakai Y. Improvement and evaluation of readability of Japanese health information texts: an experiment on the ease of reading and understanding written texts on disease. *Library and Information Science*. 2011;65:1-35. (in Japanese)
- Apter AJ, Paasche-Orlow MK, Remillard JT, et al. Numeracy and communication with patients: they are counting on us. *J Gen Intern Med*. 2008;23:2117-2124.
- Woloshin S, Schwartz LM, Welch GH. *Know Your Chances: Understanding Health Statistics*. Berkeley: University of California Press; 2008.
- Rudd RE. Guidelines for Rewriting Materials. 2012. <http://www.hsph.harvard.edu/healthliteracy/practice/innovative-actions/>.
- Schapiro MM, Nattigera AB, McAuliffe TL. The influence of graphic format on breast cancer risk communication. *J Health Commun*. 2006;11:569-582.
- Ng KH, Lean ML. The Fukushima nuclear crisis reemphasizes the need for improved risk communication and better use of social media. *Health Phys*. 2012;103:307-310.
- Carey JW, Morgan M, Oxtoby MJ. Intercoder agreement in analysis of responses to open-ended interview questions: examination from Tuberculosis research. *Cultural Anthropology Methods*. 1996;8:1-5.
- Institute of Medicine. *Health Literacy: Improving Health, Health Systems, and Health Policy around the World: Workshop Summary*. Washington DC: The National Academies Press; 2013.
- Henning M, Goto A, Chi C, Reich MR. Leveraging the Voice of Community Workers in Health Governance: A Two-Case Study from Zambia and Japan. Takemi Program 30th Anniversary Symposium. 2013.

-
24. Trevena LJ, Davey HM, Barratt A, Butow P, Caldwell P. A systematic review on communicating with patients about evidence. *J Eval Clin Pract.* 2006;12:13-23.
 25. McCaffery KJ, Dixon A, Hayen A, Jansen J, Smith S, Simpson JM. The influence of graphic display format on the interpretations of quantitative risk information among adults with lower education and literacy: a randomized experimental study. *Med Decis Making.* 2012;32:532-544.
 26. Brugg D, Edgar T, George K, Heung J, Laws MB. Beyond literacy and numeracy in patient provider communication: focus groups suggest roles for empowerment, provider attitude and language. *BMC Public Health.* 2009;21:354.

Physicians and Professional Autonomy

JMAJ 57(3): 154-158, 2014

Kazuo TEZUKA¹

1. What constitutes the exact definition and concepts of the term *profession* is not clear. In Europe, where the word *profession* was born, clergy, physicians, and attorneys have been traditionally referred to as the 3 major *professions*. Here, I would like to state the fundamental features of profession bearing in mind the latter two in particular: physicians and attorneys. (Please note that many of the following statements are based on *The Profession of the Modern Times* [Ishimura 1969].¹)

The fundamental features of a *profession* are as follows:

(1) Advanced knowledge and skills

The first characteristic is that people in a *profession* have a certain systematic knowledge and professional skills (i.e., professionalism) that are substantiated by scientific, historical, and other academic principles, and often require long-term education and training to master.

(2) Recognition of qualification and privileges by state

Secondly, the usefulness of physicians and attorneys has been approved both historically and socially. The government approves their licenses through public qualification exams and other means, provides privileges, and legally prohibits those who are not qualified from performing the acts of professionals.

(3) Non-profitability

Thirdly, the aim of physicians or attorneys is to contribute to the benefit of the general society by providing necessary services that clients demand. This feature distinguishes physicians and attorneys from the commercial activities and business transactions with its primary objec-

tive to seek profits. (Please refer to Article 1 of the Medical Practitioners' Act and Article 1 of the Attorney Act.)

(4) Activities as professional organizations

The fourth feature is that physicians and attorneys have professional organizations in order to function expeditiously. To be acknowledged by society as a professional and to gain, maintain, and further develop their social status, it is considered a necessity for physicians or attorneys to form professional organizations and perform useful activities. These organizations share certain characteristics, such as: 1) carrying out political and social activities to gain approval from the society as professionals; 2) bearing the essential responsibility to educate, train, maintain, and improve the members' skills as professionals; and 3) setting up regulations for members' behaviors and serving as an entity of ethical autonomy by providing disciplinary punishments for members' misconducts as needed.

These are the fundamental features of a *profession*. All 4 features relate to the theme of this paper, *professional autonomy*. However, the last feature, activities as professional organizations, is particularly pertinent, and I will later describe them in more details.

2. The term of *professional autonomy*. The first question is what *autonomy* means.

Autonomy in English is translated as "self-discipline" or "jiritsu" in Japanese. In its common use, *autonomy* means to proactively regulate one's behavior or to behave according to one's established standards, and not based on external governance or control. In the field of philosophy, it is the term that con-

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

stitutes the fundamental concept in Kantian ethics. It refers to “the state in which the practical reasoning power is not bound by non-reasonable senses such as external authorities or natural desires, and one sets up and follows his/her own universal rules of ethics” (Shinmura 2008).² It is also considered an antonymic concept of heteronomy.

In his *Critique of Practical Reason*, Kant states that “the autonomy of will is the one and only principle in all moral rules and their corresponding duties [Die Autonomie des Willens ist das alleinige Prinzip aller moralischen Gesetze und der ihnen gemäßen Pflichten]” (Kant 1979: p.78).³ Then, the question is what the autonomy of will is. On this matter, Kant calls the principle of following the universal rules that one has set up (and not the duties placed externally) as “the principle of autonomy of will” (Kant 1979: p.78, and Kant 2012: p.147).^{3,4}

So, then, what are “the universal rules that one has set up”? According to Kant, these moral rules (or universal rules) are something that anyone with reason and will is naturally equipped with without exception. Kant continues, “It is not particularly difficult to determine what must be done when following moral rules, so even an ordinary person with insufficiently trained understanding can easily decide even if he/she is not well versed in worldly wisdom” (Kant 1979: pgs.84-86).³

With these considerations, Kant instructs you to “act so that the maxim of thy will can always at the same time hold good as a principle of universal legislation [Handle so, daß die Maxime deines Willens jederzeit zugleich als Prinzip einer allgemeinen Gesetzgebung gelten könne]” as the moral categorical imperative (Kant 1979: p.72).³ The “maxim of thy will” mentioned here refer to the actor’s subjective principles of actions, and the “principle of universal legislation” are the universal rules (or moral rules) mentioned above. Why did Kant address it as the moral categorical imperative?

Kant states that man belongs to the realm of intellect as an intelligent subject, and, at the same time, is also a member of the realm of senses. All of our actions would conform to the principles of autonomy of pure will if man belonged only to the realm of intellect.

On the other hand, if man belonged only to the realm of senses, then we would be following the natural rules of our desires and mental tendencies and all of our actions would conform to the natural heteronomy. However, man belongs to both the realm of intellect and the realm of senses, and therefore, we cannot say that all of our actions are appropriate in light of the principle of autonomy of will—but we can say that they ought to be (Nakayama 2012: pgs.206-207).⁴

The above descriptions in Kant’s works are not easy to comprehend for us by any means. However, a scholar who is believed to be the leading expert in Japan in the study of Kant provided the following, simpler explanation.

In the Kantian moral philosophy, the autonomy of will and the freedom of will are not really inseparable but rather synonymic. In Kant, the autonomy of will means that the will is independent of anything except moral rules, and that the will adopts moral rules as its own personal standards of will based on his/her own purely rational will. Therefore, the autonomy of will is not simply freedom in a passive sense that it is not bound by sensory or natural desires. Rather, it refers to freedom in a proactive sense, wherein moral rules are imposed as the regulatory foundation of his/her own will, which leads to his/her own actions, and his/her own actions are subsequently judged by these rules. In this way, the moral of an individual actor can be realized only under the premise of free will as the autonomy of will in a proactive sense. Kant thus calls the autonomy of will “the best principle in morality (human ethics).” (Arifuku 2012: pgs.181-182)⁵

The above is the outline of what Kant stated with regard to the autonomy of will. Kant never specifically mentioned *professional autonomy*. Nevertheless, Kant stated that the moral rules that demonstrate foundation of the *autonomy* of will can be applied not only to people but also for all intellectual beings in general (Nakayama 2012: p.72).⁴ The autonomy of will that Kant describes, therefore, should be naturally applicable to the profession of physicians and to professional organizations of physicians. It is also deemed difficult to deny that the term

autonomy in the expression *professional autonomy* is derived from Kant's statements on *autonomy*.

3. Who uses the term *professional autonomy*, and how? The term *professional autonomy* is being used with increasing frequency at the World Medical Association (WMA) meetings where physicians from around the globe meet.

It seems to have started from the WMA Declaration of Madrid in 1987 (hereinafter referred to as the "old Declaration of Madrid"). Officially entitled the *WMA Declaration of Madrid on Professional Autonomy and Self-Regulation*, the old Declaration of Madrid consisted of 10 Items regarding professional autonomy and self-regulation. The main points regarding professional autonomy described in the declaration were as follows.

- (1) The core of professional autonomy is the guarantee that physicians can freely exercise their professional judgment in patient care. (From Item 1)
- (2) The WMA and national medical associations reaffirm that professional autonomy is an essential factor in high-quality care and therefore should be preserved for the benefit of patients, and urge physicians to uphold and assure professional autonomy in the care of patients as a basic principle in medical ethics. (From Item 2)
- (3) As a corollary to professional autonomy, the medical profession has a continuing responsibility to self-regulate the professional conduct of individual physicians. (From Item 3)
- (4) Professional autonomy in patient care is ultimately guaranteed through active efforts for effective self-regulation, and therefore, the WMA urges national medical associations to establish and maintain self-regulatory systems for physicians and to recommend that their members actively participate in them. (From Item 4)

The opinions shown here concerning professional autonomy appear to be the common perception among people in the current medical profession since these points are succeeded by the new revised declaration. I will elaborate on this later.

The old Declaration of Madrid also addressed other issues, such as the detailed notes on self-regulatory systems, information

exchange among national medical associations, public campaigns, and joint actions by national medical associations. (Please refer to the declaration document for more details.)

In 2008, a portion of the old Declaration of Madrid was separated and adopted as the Declaration of Seoul. The remaining portion was adopted as the revised version of the Declaration of Madrid in 2009 in New Delhi. (The old Declaration of Madrid was thus substantially divided into these 2 declarations.)

The Declaration of Seoul, which is entitled the *WMA Declaration of Seoul on Professional Autonomy and Clinical Independence*, states in its preamble that "The World Medical Association, having explored the importance of professional autonomy and physician clinical independence, hereby adopts" the 5 principles.

The Declaration of Seoul inherited the concept of professional autonomy stated in the old Declaration of Madrid in general. Yet, the Declaration of Seoul is characteristic in the way that it closely focuses on the significance of "professional autonomy and clinical independence" from the standpoint of physician-patient relationship as well as the management of healthcare costs involved in clinical medicine, and considers it the most important principle in physicians' professionalism.

The revised Declaration of Madrid (the new Declaration of Madrid) adopted in 2009, which is entitled the *WMA Declaration of Madrid on Professionally-led Regulation*, states in its preamble that "The collective action by the medical profession seeking for the benefit of patients, in assuming responsibility for implementing a system of professionally-led regulation will enhance and assure the individual physician's right to treat patients without interference, based on his or her best clinical judgment," and urges national medical associations and all physicians to take actions on the 8 Items stipulated in the declaration.

The new Declaration of Madrid is characteristic in the way that it emphasizes self-discipline in professional autonomy. The content of the old Declaration of Madrid has been carried on to the new Declaration of Madrid, except for the points, which will be described next. (Please refer to the declaration document for more details.)

4. We will consider what professional autonomy for physicians boils down to and what current challenges there are (if any). As mentioned previously, professional autonomy for physicians is generally believed to be similar to the action principles for modern physicians and their collectives.

Upon examining the overall picture of the old and new Declaration of Madrid as well as the Declaration of Seoul, all of which address the issue of professional autonomy among physicians, it becomes clear that the central element of professional autonomy for physicians is self-regulation within the medical profession. Simply stated, the word “self-regulation” entails freedom from external control and the proactive responsibility that comes with that freedom, namely: 1) to be free of external control (i.e., heteronomy) in patient care, such as governmental or administrative regulations; and 2) to fulfill the proactive responsibility in providing patient care to establish and act upon effective self-regulatory systems.

Needless to say, the self-regulatory systems mentioned above must not be self-righteous ones in service of physicians or their organizations. Naturally, such systems must be able to win consensus among physicians and their organizations as showing a right direction for their profession. With regard to those points, the contents of the previous WMA declarations seem to have paid due consideration, generally. However, the following Items in the new Declaration of Madrid seem to raise more proactive concern from a new perception.

Item 4. To avoid being influenced by the inherent potential conflicts of interest that will arise from assuming both representational and regulatory duties, National Medical Associations must do their utmost to promote and support the concept of professionally-led regulation amongst their membership and the public.

Item 8. An effective and responsible system of professionally-led regulation by the medical profession in each country must not be self-serving or internally protective of the profession, and the process must be fair, reasonable and sufficiently transparent to ensure this. National Medical Associations should assist

their members in understanding that self-regulation cannot only be perceived as being protective of physicians, but must maintain the safety, support and confidence of the general public as well as the honour of the profession itself.

A professional organization of physicians bears the responsibility to perform politically, economically, or socially promotive actions to represent its member physicians to the public. On the other hand, the organization has the duty to make its member physicians fulfill self-regulatory principles. Item 4 above addresses potential conflicts of interest that can be produced between the roles of self-promotion and self-regulation, and encourages the minimization of the effects of such conflicts and to promote understanding and support of the concept of professionally-led regulation of physicians from member physicians as well as from the general public. The problem of potential conflicts of interest has been recognized for a long time, but rarely addressed directly. Item 4, which stipulated this challenge, demonstrates a progressive effort on the part of the WMA.

The professionally led regulatory systems by physicians that are addressed in Item 8 will not receive external evaluation in contrast with laws or ordinances. Nevertheless, these systems must not be tainted with self-interest, nor be protective of physicians; the systems must be fair and rational with sufficient transparency. I would insist that fulfilling these criteria will be essential in protecting the honor of the medical profession and contributing to the safety of the general public as well as gaining their support and trust.

Items 4 and 8 appear to share certain aspects with the aforementioned Kantian principle of autonomy of will. Further, Items 4 and 8 appear to step away from the ordinary concept of professional autonomy and show the WMA’s determination to proactively challenge further difficult problems.

I discussed the issue of physicians and professional autonomy in the foregoing. One final note is that the old and new Declaration of Madrid and the Declaration of Seoul including Items 4 and 8 quoted above only present basic challenges and proposals.

Achieving the goals the WMA Declarations set forth above is principally left to the spe-

cific future actions of the physicians in each country and their national medical associations.

References

1. Ishimura Z. *The Profession of the Modern Times*. Tokyo: Shiseido; 1969. (in Japanese)
2. Shinmura I, ed. *Kojien*. 6th ed. Tokyo: Iwanami Shoten; 2008. (in Japanese)
3. Kant I. *Kritik der praktischen Vernunft [Critique of Practical Reason]*. Hatano S, Miyamoto W, Shinoda H, trans. Tokyo: Iwanami Shoten; 1979. (in Japanese)
4. Kant I. *Grundlegung zur Metaphysik der Sitten [Groundwork of the Metaphysic of Ethics]*. Nakayama G, trans. Tokyo: Kobunsha; 2012. (in Japanese)
5. Arifuku K. *Ethics of Good Will: For Those Who Study Kant*. Kyoto: Sekaishisoshia; 2012. (in Japanese)

The range of activities carried out by the Japan Medical Association (JMA) is extremely extensive. I believe that this can clearly be observed by readers of this issue of the JMA Journal.

First, the guidelines for administering stable iodine that we developed in case of a radiological emergency arising from a nuclear accident are good examples. In the accident at the Fukushima Daiichi Nuclear Power Plant after the Great East Japan Earthquake and Tsunami in 2011, we experienced considerable difficulties when we tried to provide sufficient medical advice regarding the evacuation of local residents in response to radiation risks.

In view of this incident, the JMA established new guidelines that stipulate that physicians should clearly present their professional opinions and actions to the public. It should be noted that the task-force members of JMA and its research institute (JMARI) engaged in sufficient discussions with the authorities in charge and relevant government officials before doing so.

The next example is the JMA Global Health Committee's report, which mentions current views and future perspectives about the JMA's global activities. It discusses how global activities led by the WMA can potentially contribute to the improvement of community medicine in Japan. It is important that each physician considers, in their daily practice of medicine, what role their practice plays in the international arena, and reflects those thoughts to improve their medical

activities based on wider perspectives.

The article by Mr. Morioka, based on a questionnaire survey pertaining to disciplinary actions of physicians that was conducted in 2013 through collaboration with 13 national medical associations, is also intriguing. Mr. Tezuka's article about physicians and professional autonomy is another interesting piece that contains opinions from a lawyer's standpoint. The weight of his words leads me to believe that legal experts and physicians need to share comprehensive understanding. These two articles will prove to be very significant in facilitating deeper global understanding.

Incidentally, Vol. 57 No. 1 of the JMAJ was the last paper publication; it is now being released in e-journal format.

It is widely known that the Internet is assuming leadership in transmitting information from journals, as seen in the speed of development of current international affairs. The contents of the JMAJ are available through the JMA's English website as well as through PubMed Central.

We shall further investigate the potential applications of the JMAJ as an e-journal and explore how the JMAJ can contribute more as a means of providing information to the WMA and CMAAO members.

Masami ISHII, Executive Board Member, Japan Medical Association (jmaintl@po.med.or.jp); Vice-Chair of Council, World Medical Association; Secretary General, Confederation of Medical Associations in Asia and Oceania (CMAAO).



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.



Japan Medical Association

www.med.or.jp/english/