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Essay

Managing a Narrow Escape from Death

From the Editor's Desk



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PUBLISHER

Japan Medical Association

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

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

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

www.med.or.jp/english/

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Policy Address*¹

JMAJ 58(3): 65-68, 2015

Yoshitake YOKOKURA¹

Looking back on past year, our society has seen various changes. Among these changes, however, the Japan Medical Association (JMA) has been taking a leading role in tackling health, medical care, and welfare issues, and has been addressing innovative activities while maintaining comprehensive and ever deepening insight. In this regard, three basic policies for delivering our activities, which were raised at my reappointment as President of the JMA in June 2014, have been pursued: strengthen the organization's power; support community healthcare; and consider future healthcare.

For strengthening the organization's power, the annual membership fees for resident members were reduced or exemptions were given, and the annual usage fee for the Medical Doctor Qualification Certificate (IC card issued by the JMA Certificate Authority) has been nullified as of April 2015, based on a suggestion from the JMA Organizational Strengthening Review Committee chaired by Dr. Tasuku Oyamada, President of the Akita Medical Association.

As a measure aimed at promoting the initiation of non-member doctors into our association, we are addressing the preparation of a new mechanism for offering a portion of the services for JMA members free of charge for a certain period of time.

In addition, for dissemination of this IC card, regional application and review offices were set up, with the cooperation of prefectural and municipal medical associations, and upgrading and expansion of services were implemented, e.g., by interacting with the continuing medical education system. In recent years, impersonation



of doctors has become an issue of increasing concern. To prevent this serious problem, we intend to promote further spread of our Medical Doctor Qualification Certificate.

We are also addressing an acceleration of our efforts to reassemble the membership information system aimed at mutual use by the JMA and prefectural medical associations, elimination of the time lag at information entry, and so on, as well as other activities including preparation of new brochures to provide a simplified but comprehensive introduction to the activities of the JMA.

The JMA is the only organization that represents the voice of Japanese physicians. Along with our efforts to strengthen the organization to embody our goal, we have been endeavoring to promote public activities to “support community healthcare,” the JMA's founding objective.

As we all know, under the current situation in which we are facing the pressures of financial restructuring at the national level, there is an urgent need to take action toward 2025, when the baby boomers reach 75 years of age or older. To maintain the social security system, it is essential to make plans and achieve improvements adapted to the trends of our aging society. We believe that necessary evidence and ideas for such plans are all present in clinical practice.

While holding this thought in our minds, the JMA is conferring with the Council of Four

*¹ This is a revised English version of the policy address delivered in Japanese by Dr. Yoshitake Yokokura at the 135th Regular General Assembly of the JMA House of Delegates held in Tokyo, June 28, 2015.

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

Hospital Organizations to formulate recommendations regarding the optimal approach to healthcare provision in 2025 and thereafter. The JMA is attempting to enhance the system of providing healthcare while promoting comprehensive community healthcare through cooperative activities.

On March 31 of this year, the Guideline for Conceptual Planning of Community Healthcare was released by the Ministry of Health, Labour and Welfare (MHLW). This guideline shows the process of developing the mechanism for enhancing the community healthcare provision system, adequately reflecting the opinions of the JMA. The main body involved in the planning of the community healthcare concept is the prefectural Council on Medical Service Facilities. Therefore, with reference to the guideline, the prefectural medical association is expected to lead the discussion in the council for planning a community healthcare concept that will fully reflect the voices of healthcare professionals, patients, and citizens.

The 29th General Assembly of the Japan Medical Congress 2015 Kansai, held in April of this year provided an invaluable opportunity for healthcare providers and the public to think about community healthcare, achieving a total of about 400,000 participants in academic lectures and exhibits and participatory events for general citizens. The success of this assembly owes a great deal to the excellent support received from doctors at the Kyoto Medical Association, i.e., the prefectural medical association of the venue for the assembly, and the Union of Kinki District Medical Associations as well as representatives of the JMA and medical association members around Japan. Grateful acknowledgment is expressed to all of these people on this occasion.

In the General Assembly, “Building a Bond” was the subheading. As a system to promote further building of the relationship of trust between patients and doctors, the Medical Accidents Investigation System will be initiated starting in October of this year. We are confident that smooth functioning of this system will facilitate determination of the causes of accidents at an earlier stage and the development of preventive measures.

To make this investigation system more effective, active involvement of prefectural med-

ical associations as support organizations for investigating medical accidents, as well as other related issues, is highly anticipated. The JMA intends to provide continuous support for full implementation of their efforts regarding this important issue.

In addition, the JMA is planning to set up a new form of insurance that covers expenses incurred while investigating in-hospital accidents by any medical institution in which the JMA member is a founder or manager, in accordance with the launching of the investigation system.

We will pursue further enhancement of this system to improve medical safety and promote community healthcare, cooperating with other medical professionals, patients, and the general population in an integrated manner.

In addition, in regard to measures to deal with the ongoing outbreak of Middle East respiratory syndrome (MERS) in South Korea, we will continue our endeavors and commitment to providing information promptly to members and call for the attention of the general public, while remaining in close ongoing contact with the MHLW.

While addressing the various issues we are now confronting, the JMA must undertake an important role which can be broadly described as the need to “consider future healthcare,” taking into account the future demand and supply of healthcare and other factors. We must launch policy recommendations and new projects keeping this important role in mind.

Japan has been facing population decline as a result of the falling birthrate and a growing proportion of elderly people at a rate unprecedented worldwide. In general, a decrease in the working age population occurs first, and this is followed by a decrease in the population of the elderly. Along with this trend, the society as a whole begins to experience economic contraction. However, in the field of healthcare and nursing care services, the demand for such services increases, and hence the labor force demand naturally increases because such services are labor-intensive by nature. These changes occur nationwide, regardless of whether areas are urban or rural, which reflects major impacts of healthcare and nursing care on local economies. The presence of community-based medical facilities that provide “primary care physicians” is directly tied to the appeal of a region, and may help

prevent the outflow of child-rearing families to urban areas and halt depopulation of the region.

Social security and economics are interactive fields, and we believe that reassuring people who have anxiety about rearing their children and about their old age eventually serves as the starting point for regaining economic growth. The JMA will advocate this issue to the general public, and propose optimal approaches to healthcare during and after 2025 and present the policies designed for realization of such healthcare, which is a major subject of discussion with the aforementioned Council of Four Hospital Organizations.

First and foremost, healthcare deals with universal aspirations of all human beings, such as health and life. In Japan, the products of progress in medical science and technology have generally been returned to society through the nation's universal health insurance system. As a result, Japan enjoys a high reputation internationally as having achieved the first-class level of health.

On the other hand, we must also focus on the issue of how to accept new innovations in the current mature society. Namely, it is important to develop an environment which favors and nurtures the benefits of medical science and healthcare and to prepare means of returning such benefits to the general public.

In regard to the domestic market for medical equipment, Japan's is the world's second-largest market following only that of the US, and imports from overseas account for nearly half of this market. The export value is less than half of the import value, showing a prolonged state of import surplus. To improve this situation, the Japan Agency for Medical Research and Development (AMED) was set up in April of this year. Whether Japan can produce a greater amount of scientific output would appear to be a key factor in determining the future potential for continuous growth in our country. Therefore, to support Japan's measures and policies, the JMA launched efforts to support the development and business operation of medical equipment manufacturers and suppliers, as led by doctors, through the use of the AMED.

In addition, the JMA is willing to cooperate with the Japanese government in the implementation of necessary measures and innovations that the government should address to achieve

advancements in medical science and healthcare and the establishment of a sustainable social security system. However, we must take a firm attitude toward the measures and innovations that can bring about the situation in which healthcare is left to market mechanisms, out of the hands of the general public, in the name of financial restructuring or reform.

With these thoughts in mind, the JMA expressed its view against the so-called "reference pricing system" and the policy of "fixed visitation charges," which were proposals submitted by attendees at meetings of the sectional committee of the Fiscal System Council and the Council on Economic and Fiscal Policy. These proposals were not acceptable because they necessitated that the elderly and low-income earners would be unable to visit doctors, thereby interfering with the securing of fair and equal provision of healthcare.

The JMA also issued an emergency statement jointly with the Japanese Association of Medical Sciences and the Association of Japan Medical Colleges, citing opposition to the issue of newly creating medical schools in national strategic special zones, as these might give rise to problems in obtaining the optimal situation for future healthcare in Japan and lead to the collapse of community healthcare.

Thus, in our modern society in which healthcare exerts influences on many aspects of life, it is indispensable to implement policies that are unified and coordinated with those of other healthcare professionals as well as people involved in a variety of fields, including those with interests from the standpoints of the government and ruling parties, the economic community, and judicial circles. Even if the goal being pursued is the same, the attitude toward and means of reaching the goal may differ according to these standpoints. Therefore, strong conviction is necessary to avoid overly hasty or poorly thought out resolutions of differences, i.e. settlements should not be accepted until all issues and viewpoints have been thoroughly considered.

In particular, it is anticipated that discussion of the revision of medical fees for the next fiscal year will become increasingly serious and contentious toward the end of this year. On June 22, the draft of the government's policy for the budget compilation of the next fiscal year, the so-called "Big-Boned Policy 2015," Basic Policies for Eco-

conomic and Fiscal Management and Reform 2015, was presented at the Council on Economic and Fiscal Policy. It is anticipated that the JMA will come under pressure to give a very difficult response under the current financial conditions, as well as based on other political considerations, here in Japan.

However, healthcare and nursing care represent essential public services, and must be placed above all else as national undertakings aimed at maintaining and enhancing the lives and health of Japanese people. To begin with, the social security system is based on benevolence and a high sense of ethics, traits held dear by human beings, and is aimed at contributing to the social stability and peace of mind of the Japanese people.

With recognition of this important aim, we have thus far engaged in discussion of the most appropriate way of implementing and maintaining the social security system, keeping in mind the following criteria: whether the policy is conducive to safe healthcare for the people and whether the policy allows us to maintain the nation's universal health insurance coverage as currently provided by public health insurance.

We intend to strongly state the JMA's opinions, holding to our firm beliefs, and thereby do our utmost for the good of the people. Further understanding of and support for the JMA will be highly appreciated.

Social security is said to provide a so-called

“safety net,” in other words an assurance of public safety during peacetime. In fact, the Diet is presently in the process of debating security legislation. We, as healthcare professionals, hope that this issue is carefully deliberated in the Diet, with the lawmakers listening attentively to the voices of the people. Reaching the best possible policy conclusion, one which protects the lives and peace of the Japanese people, is essential.

On April 4, a lecture in commemoration of the visit of the Dalai Lama was held in JMA auditorium with cooperation from Dr. Tadao Kanai, President of the Saitama Medical Association, and many other dedicated and concerned people. The Dalai Lama stated that, “Healthcare will be perfect when a warm heart is present in addition to excellent knowledge and skills.” He described healthcare professionals who eliminate pain and render services to their patients as “people like bodhisattva.”

If all 166,000 members of the JMA devote their energies to clinical practice with his words in mind, we believe that the sincerity of their efforts will inevitably lead to a good result, and we can assure that this nation has a bright future in terms of healthcare. In closing, I swear that I will do my utmost to fulfill the heavy responsibilities of the president of the JMA, serving as a flag-bearer for the dedicated healthcare professionals who are members of this organization.

Thank you for your careful attention.

Health Literacy Training for Public Health Nurses in Fukushima: A Multi-site Program Evaluation

JMAJ 58(3): 69-77, 2015

Aya GOTO,¹ Alden Yuanhong LAI,² Rima E. RUDD³

Abstract

Public health nurses (PHNs) are community residents' access points to health information and services in Japan. After the Fukushima nuclear accident, they were challenged to communicate radiation-related health information to best meet community needs. We previously developed and evaluated the outcome of a single-site health literacy training program to augment PHNs' ability to improve community residents' access to written health information. This paper presents an evaluation of an identical training program using data combined from multiple sites, and further included proximal and distal evaluations to document the impact of health literacy training in a post-disaster setting. A total of 64 participants, primarily experienced PHNs, attended one of three multi-session health literacy workshops conducted in multiple sites across Fukushima. Quantitative and qualitative data on PHNs' training satisfaction, self-evaluation of achievements regarding training goals, and application of learned skills were collected and analyzed. Each workshop consisted of two 2-hour sessions introducing health literacy and assessment tools and developing skills to improve written materials, followed by a one-month follow-up assessment on PHNs' application of the gained skills in the field. Post-training evaluations on the appropriateness and usefulness of the workshop were highly positive. At the end of the one-month follow-up, 45% of participants had gained confidence in assessing and revising written materials and had applied the skills they had gained to develop and communicate health information in various settings and modes. This increase in confidence was associated with further application of the learned skills at the municipal level. However, participants reported difficulties in explaining risks, and the need to learn more about plain language to be able to paraphrase professional terms. This paper highlights the positive outcomes of health literacy training among PHNs. Practical strategies to reinforce their skills to use plain language and communicate the epidemiological concept of risk are also recommended.

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

Introduction

Accurate, timely, and accessible information provision is the foundation of collaboration between community authorities during any major health event. Rudd and colleagues assessed two US-based nationwide disseminations of written information (an AIDS brochure in 1988 and an anthrax postcard in 2001) and recommended establishing an expert team in delivering "clear, truthful and effective health messages during the time of

crisis" in order to "leave no one behind."¹ Likewise, Bromet reviewed previous nuclear accidents, describing how confusing information led to people's mounting anxiety, and recommended providing truthful information and setting up dosimetry monitoring centers.²

Since the Fukushima nuclear accident in 2011, local municipal offices have developed and distributed numerous written materials about the health effects of radiation in order to counteract the expected negative consequences of

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

² Department of Health Policy & Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA.

³ Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA, USA.

confusing messages. There has been a flood of information through various channels—from traditional channels such as television and newspapers, to more modern ones such as blogs and Twitter.³ During the acute phase of the Fukushima disaster, Yamashita called the situation an “information disaster” because healthcare professionals struggled with communicating disaster-related information in an appropriate and coordinated way.⁴ Sugimoto and colleagues reported findings from a survey conducted among over 1,500 residents in Fukushima that relying on rumors was associated with greater worries about radiation health effects.³ However, they found that joint seminars by local governments and universities alleviated participants’ anxiety. The literature clearly suggests that coordinated and planned communication efforts are needed during and after a public health crisis.

Training programs for health professionals on both the national and local levels can support these efforts to promote effective communication with the public. In Japan, public health nurses working in prefectural and municipal offices are community residents’ access points to health services. They assess residents’ health needs and plan and implement community health activities, including information provision. After the nuclear accident, these nurses faced difficulties in communicating radiation-related information and voiced needs to improve their communication skills.⁵ To mitigate these communication problems, a training program for improving written communication was developed for public health nurses. The program was shaped by findings from health literacy studies indicating that a good deal of health information is inaccessible to the general public, due in part to the use of unexplained jargon, sophisticated numeric concepts, and scientific terms. The training program was based on Rudd’s “Eliminating Barriers-Increasing Access Workshop,” and was adapted from an American context to a Japanese one. The adaptation process as well as the program format and content were reported in a recent issue of the *Japan Medical Association Journal*.⁶ Furthering this work, the present study documents the proximal and distal evaluations of the health literacy training program provided to public health nurses with combined data from multiple sites.

Methods

Design and sample

A proximal post-training program evaluation and a distal (i.e., one-month) follow-up evaluation were conducted and analyzed. A total of 64 participants, mostly public health nurses working in three regions of Fukushima (central, coastal, and mountainous), attended a workshop organized in each region. The preliminary results from the first workshop, which was held in the central region, have been reported previously.⁶ By referring to Thabane and colleagues’ tutorial on pilot studies and with publisher permission to use the data from our preliminary report,⁷ the data from the workshop conducted in the central region (Source: Table 3, p.150, *JMAJ*, May/June 2014—Vol.57, No.3) was included in the present analysis along with the data from the other two regions to ensure coverage from all workshops conducted across Fukushima. Each workshop comprised two sessions. There was no change in terms of program content and evaluation methods between the first workshop conducted in the central region and the two workshops subsequently conducted in the coastal and mountainous regions.

Measures

Quantitative and qualitative data on public health nurses’ training satisfaction, self-evaluation of achievements of training goals, and application of learned skills were collected through surveys at the end of each session and at a one-month follow-up.

In the surveys at the ends of the first and second sessions, there were six evaluation indicators related to adequacy of teaching materials, time allocation, facilitation, knowledge gain, and practicality of the lecture and exercises. Five-point Likert-scales were used, ranging from “highly disagree” (1) to “highly agree” (5).

In the follow-up survey, we assessed public health nurses’ achievements regarding 12 specific training goals: four items were on basic knowledge of health literacy, four were on material assessment, and four were on material development. In addition, we asked participants to describe their applications in daily practice, identify barriers in applying learned skills, indicate what they wanted to learn further, and describe what they planned for the city’s com-

Table 1 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	

The table was reproduced with publisher permission (Source: Table 2, p.149, JMAJ, May/June 2014—Vol.57, No.3).⁶

munity health activities.

We further assessed the readability of materials that participants voluntarily submitted in order to concretely examine the extent to which participants were able to apply the content of the workshop. First, we applied the Japanese version of a systematic assessment tool known as the Suitability Assessment of Materials (SAM).⁸ The tool comprises 23 items covering five areas: content, literacy demand, graphics, layout and type, and learning stimulation and motivation. Each item is scored with “superior (score 2),” “adequate (1),” or “poor (0).” A total score ranges from 0 to 46. Next, we determined each material’s grade level, which is often calculated by using a tool that determines the level of difficulty of the material in terms of the complexity of words and sentences. This grade level was calculated by using a free online tool named Obi-2.⁹

Intervention

The model workshop protocol was developed by Rudd as part of the Health Literacy Studies project at the Harvard T.H. Chan School of Public Health.¹⁰ The workshop was originally designed for public health professionals interested in improving health literacy in their practice in the US with a focus on the critical elements of health communication that prove problematic for the public. The workshop emphasized that the lessons learned from assessments of health materials can be applied to both oral and written

communication. Rudd’s workshop processes, content, and tools were adapted to respond to the needs of public health nurses in Fukushima.⁶ In brief, major modifications were made to incorporate tools appropriate for the Japanese language and communication of risk specific to Fukushima.

The workshop was conducted over the course of two days with a one-month follow-up focused on field application. Each session was designed to take two hours and comprised lectures, exercises, and discussions. Of note, the session time of the workshop conducted in the mountainous region was shortened from two to 1.5 hours due to logistical reasons, but the content was kept identical by eliminating break times. The main objectives of the first session were to learn about health literacy research and findings and to develop skills in the use of assessment tools for the examination of written health materials. The second session focused on the application of insights for re-structuring and improving the materials assessed in the first session. The workshop was designed in a way that allowed the lessons learned in the assessment of written materials to be applied to oral presentations and discussions as well. **Table 1** illustrates the overall structure of the program.⁶

Analytic strategy

A basic evaluation framework for the workshop was published previously.⁶ In the present paper, we also report the results of qualitative analyses

of participants' written opinions about their training and the health literacy assessments of their written materials to deepen our understanding of the workshops' outcomes.

Quantitative data were analyzed using STATA statistical software, version 13 (Stata Corporation, College Station, TX). Qualitative data from the follow-up survey were analyzed by referring to Carey and colleagues' coding and intercoder agreement methods.¹¹ A code list was developed by the first and second authors through a process of independent categorization and comparison of obtained results using the data from the central region.⁶ The finalized code list was used to analyze data from the workshops conducted in the other two regions. These two authors performed coding independently, and the results were compared and finalized by the first author.

To triangulate the quantitative and qualitative data, data related to respondents' confidence in assessing and revising written materials (quantitative data) were cross-tabulated with their written responses (qualitative data) to ascertain if they had expressed plans to apply the skills they had learned to municipal activities. In order to investigate the degree of knowledge application in the field, participants' descriptions of their applications in daily practice were analyzed using Steps Coding and Theorization (SCAT).¹² This qualitative analysis method is appropriate for small-scale qualitative studies with a limited amount of qualitative data including answers to open-ended questions in surveys. The analysis consists of two steps—first, decontextualization to generate themes from sentences, followed by theorization via summarizing collected information to construct theories. The first step comprises four smaller steps: listing key words, paraphrasing them, extracting higher-order concepts, and creating major themes. In the theorization step, we developed a storyline from the emerging themes through recontextualization. We previously applied and reported the same method used in the analysis of the content of public health nurses' discussion meetings.⁵

In addition, two participants submitted samples of their written materials before and after revision. These were works done during the one-month follow-up. Submitted materials were scored using the SAM independently by two researchers (the first author and a public health researcher who had attended the health literacy

workshop), and the results were compared to achieve consensus.

Ethical consideration

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

Results

Among 59 participants with their profile data available, 54 were public health nurses and five were nutritionists or administrative staff working in a health sector with the public health nurses. The median years of working experience was 14, ranging from less than one year to 38 years, and 56% had an experience of 10 years or longer. Twenty-seven (46%) attended both sessions.

Table 2 shows the results of the surveys at the end of each session with a response proportion of 88% (45/51) for the first evaluation and 98% (43/44) for the second evaluation. Over 85% of respondents agreed to all statements ascertaining the appropriateness and usefulness of both sessions.

Table 3 shows the results of participants' self-evaluations of achievements regarding the training objectives at the one-month follow-up survey; the response proportion was 92% (59/64). Forty-five percent of participants reported gaining confidence in assessing and revising written materials, and 47% reported applying the skills they had learned in the workshops during the follow-up period. These proportions were higher among those who attended both sessions; 54% of them reported a gain in confidence, whereas only 38% of participants who had attended one workshop reported such a gain. The same trend was observed for the application of skills—it was 54% for participants who had attended both sessions and 42% for those who had only attended one session. Furthermore, 63% of the respondents reported that they could explain health literacy needs; 71% reported that they

Table 2 Participants' session evaluation at the end of the first and second sessions

Statements	N (%) of 4 and 5 ^a	
	First session (N=45)	Second session (N=43)
Teaching materials were appropriate.	42 (93)	43 (100)
Time allocation was appropriate.	40 (89)	41 (95)
Facilitation was appropriate.	43 (96)	43 (100)
I gained knowledge about health literacy.	41 (93)	42 (93)
What I learned from the lecture is useful for health activities.	42 (93)	43 (100)
What I learned from the discussion is useful for health activities.	41 (91)	43 (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 proportions of the participants who answered 'agree' and 'highly agree.'

Table 3 Participants' self-evaluation of achievements toward training objectives in the follow-up survey

Statements	N (%) of 4 and 5 ^a		
	Total (N=59)	Attended once (N=32)	Attended twice (N=27)
Workshop evaluation			
I gained confidence in assessing and revising written materials.	26 (45)	12 (38)	14 (54)
I applied learned skills in practice.	27 (47)	13 (42)	14 (54)
Self-evaluation of achievements			
Knowledge about health literacy			
I can explain health literacy needs.	37 (63)	20 (63)	17 (63)
I can explain the definition of health literacy.	23 (39)	10 (31)	13 (48)
I can explain numeracy levels.	14 (25)	5 (17)	9 (33)
I can explain about people's health literacy level in Japan.	16 (28)	5 (17)	11 (41)
Skills in assessing written materials			
I can use the Marker Method (a communication method to ask readers to mark difficult words and phrases).	41 (71)	17 (55)	24 (89)
I can use Obi-2 (software to assess readability).	19 (34)	5 (17)	14 (52)
I can use the SAM (a systematic assessment of written materials from layout to content).	15 (26)	6 (20)	9 (33)
I can use single-item screening method of health literacy level.	16 (29)	6 (20)	10 (38)
Skills to revise written materials			
I can write easy-to-read text.	29 (49)	16 (50)	13 (48)
I can develop a leaflet step-by-step.	19 (32)	9 (28)	10 (37)
I can develop easy-to-understand graphics.	17 (29)	8 (25)	9 (33)
I can explain risk.	7 (12)	3 (9)	4 (15)

^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 proportions of the participants who answered 'agree' and 'highly agree.' Total numbers of some items do not add up to the numbers indicated in the top row due to missing data.

could use the Marker Method; and 49% reported that they could write texts that are easy to read. However, only 12% could explain risk during

practice.

Table 4 illustrates the frequencies of codes from the follow-up survey. The component that

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

Codes (Total N of respondents)	N ^a
Application of learned skills (44)	
Applied to developing and communicating health information/education materials	24
No opportunity to apply thus far	9
Will apply	8
Applied to other written materials and verbal communication	7
Application barriers (28)	
Technical difficulties to improve sentences, tables, and graphs	18
Workplace difficulties related to sharing learned skills, changing work norms, and time and cost constrains	7
No opportunity to apply thus far	4
Further learning (27)	
Need to continue learning by practicing and attending more training	14
Need to learn more skills in communicating scientific/technical information and verbal/motivational communication	13
Not in particular	1
Plans for municipal activities (18)	
Apply health literacy skills in health information/education and planning of health activities	12
Work with community and different sectors	7
Not in particular	4

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

received the highest number of responses in the follow-up evaluation was the application of learned skills at the individual level for health-related information/education materials (N=24).

SCAT was then applied to qualitatively analyze participants' opinions about the application of the learned skills. A synthesis of the themes revealed that at the individual level, health literacy training led to participants' immediate use of learned skills in various settings (including school health education, parenting support, support groups for the elderly, and home visits) and for different types of materials (including leaflets, oral presentations, and e-mails). Participants also responded on how the training had prompted them to adopt a health literacy perspective when reviewing their communication activities thereafter. Immediate application reaffirmed the importance of health literacy for the participants. The public health nurses reported that they subsequently applied their learned skills. For example, two nurses wrote:

"We revised our leaflets, compared the materials before and after the revision, and learned the

importance of developing easy-to-understand materials."

"I used the software to assess the materials I use. It was good that I could evaluate its readability. I want to continue using [this skill] when developing information materials."

The training further revealed an impact at the organizational level. Nurses reported that the planning and implementation of several health promotion activities became more health-literacy-driven. According to the reports, this served to further increase nurses' professional confidence and the building of teamwork. For example, two nurses wrote:

"When I gave a talk about exercise and practiced at an elderly club, I used topic sentences and SAM to make a leaflet. I was able to clearly communicate my points and facilitate [the session] smoothly."

"I assessed my flyer announcing a health education class by using the readability assessment tool, explained [it] to a section chief, and revised [the] expressions [by myself]. After that, I did group

work to share opinions [with my colleagues] to revise [the flyer further]. As a result, I believe that my flyer is easier to understand among citizens.”

The other frequently given opinions, noted in **Table 4**, were about barriers to application and indications of further learning needs. Respondents found that writing in plain language made sentences lengthier, and they reported difficulties in balancing readability and amount of information. Consequently, they indicated that they wanted to learn more skills focused on vocabulary and how best to paraphrase medical and administrative terms.

As shown in **Fig. 1**, participants’ gained confidence in assessing and revising written materials was significantly associated with their intention to apply learned skills to municipal activities (chi-square test, $P=0.03$).

The readability assessment of the two submitted written materials revealed that the grade-level decreased from 9 to 8 in both (lower scores indicate greater ease of reading). The total score of the SAM increased, because of an increase mostly in “content” and “graphics, layout and type,” from a score of 33 to a score of 36 in one case and from a score of 32 to one of 40 in another. The material that showed the 8-point increase was an information leaflet about influenza, and its revised version eliminated medical terms about symptoms and complications, instead adding more information about recommended preventative behaviors, and used topic sentences more effectively.

Discussion

Participants of the three workshops gave high ratings in their evaluations of the appropriateness and usefulness of the training that they received at the workshops. About half of these participants reported that they had gained confidence in assessing and revising written materials, which was more evident among participants who had attended both sessions. Furthermore, participants who had gained confidence were more likely to apply their learning in their work at the municipal level. Such applications were reported in various settings and modes, leading to a positive cycle of increasing confidence and continuous application of the health literacy skills gained in the workshop. The assessment of actual samples

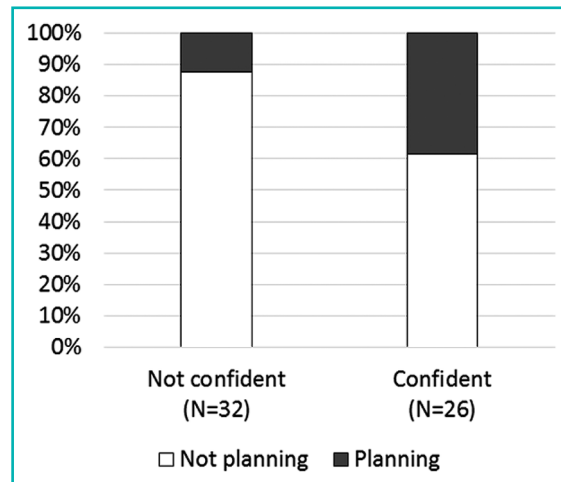


Fig. 1 Gained confidence in assessing and revising written materials and intention to plan municipal health literacy activities

Confidence in assessing and revising written materials was asked at the end of a one-month follow-up. A five-point Likert-scale ranging from ‘highly disagree’ (1) to ‘highly agree’ (5) was used, and 4 and 5 were categorized as confident. Those who wrote opinions about plans to apply learned skills to municipal activities were categorized as “planning,” excluding those who answered “not in particular” (N = 4 as shown in Table 4).

$P=0.03$ by chi-square test.

of participants’ written materials yielded clear indication of improved readability and content. Furthermore, we note that the materials chosen for rewriting were both for health promotion rather than for disaster- or risk-related materials. We speculate that the workshop participants may not have yet been comfortable addressing more difficult materials or those with many scientific terms. In addition, our analyses revealed that there are still needs for further training in the paraphrasing of medical and administrative terms and interpretations and explanations of “risk.”

It is noteworthy that there was a positive loop of application and confidence according to both the quantitative and the qualitative analysis results. This favorable influence was observed both at the individual and organizational levels. It is well-recognized that practice and field applications are key to improving health literacy skills.¹³ Such constant learning efforts at the individual level can lead to the building of a health-literacy-conscious environment at the

organizational level. One previous study conducted an in-depth investigation of the roles of Japanese public health nurses in the community, and found that the major constructs were identifying and responding to community needs, and building a trust relationship through an “open communication channel.”¹⁴ When public health nurses improve their communication skills, it can enhance many aspects of their roles in the community and build their professional confidence.

We observed that the workshop participants continued to struggle with paraphrasing professional terms and describing “risk.” The National Institute for Japanese Language and Linguistics released a glossary of terms used at hospitals,¹⁵ and a few terms were included in our training workshop. However, the glossary was developed for clinical use and does not contain a sufficient number of words that public health nurses use in health promotion activities. With regard to the difficulty of communicating “risk,” this was the major topic discussed at the Institute of Medicine’s recent health literacy workshop in 2013.¹⁶ The report pointed out that communication of risk is not only about explaining epidemiologic risk, but also about addressing people’s personal values and conveying the abstract notion of uncertainty implied in any discussion of risk. This is most certainly the case in the aftermath of the Fukushima nuclear accident; differences in risk perception deepened people’s concerns about their health and safety.⁵ The report further recommended the usage of plain words, careful explanation of numbers, and the use of appropriate and well-tested graphics.

To close the theory-praxis gap, we first recommend developing a public health version of a glossary of terms. This should be developed through a participatory and iterative process with nurses and community residents. Both must be part of the development of health communication messages as well as in the assessment and pilot testing for clarity of these messages. Second, further training is needed to provide opportunities for nurses to review basic epidemiological concepts, to work with experts in writing plain language for “translation” and explanation, and most importantly, to practice explaining sophisticated terms to community residents. Both individual and organizational commitments are needed for the nurses to spend time and effort on improving their individual

skills and municipal health services through a health literacy approach.

There are three major limitations in the present report. First, not all participants attended both sessions. Better recruitment effort is required to maximize the training effects. Second, we did not have a control group. However, this was a formative program evaluation that aimed to explore lessons learned and discuss ways to improve.¹⁷ Third, this evaluation focused on the proximal and distal outcomes of a health literacy training program in the context of health promotion activities after the Fukushima disaster. Additional research specific to the use and application of disaster-related information are required to generate insight that can contribute to our knowledge of disaster preparedness and recovery.

A health literacy workshop has great potential for improving public health nurses’ communication skills and community health services. In Fukushima, this health literacy initiative took place only after the disaster, but clearly should have been started beforehand as part of a rigorous orientation and training program for community-based work. Furthermore, this experience offers insight into the need for plain language training on all levels. The presented workshop can serve as an example for improving national preparedness for risk communication in future public health crisis scenarios. Mandated formative research would of course aid this process. Over time, more rigorous pilot testing of materials with members of the intended audience along with revisions and explanations will enable officials to develop materials that are well suited for use in communities and for public distribution.

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Study of Global Health Strategy Based on International Trends

—Promoting Universal Health Coverage Globally and Ensuring the Sustainability of Japan's Universal Coverage of Health Insurance System: Problems and Proposals—^{*1}

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Takashi HATANAKA,¹ Narumi EGUCHI,² Mayumi DEGUCHI,³
Manami YAZAWA,³ Masami ISHII⁴

Abstract

The Japanese government at present is implementing international health and medical growth strategies mainly from the viewpoint of business. However, the United Nations is set to resolve the Post-2015 Development Agenda in the fall of 2015; the agenda will likely include the achievement of universal health coverage (UHC) as a specific development goal. Japan's healthcare system, the foundation of which is its public, nationwide universal health insurance program, has been evaluated highly by *the Lancet*. The World Bank also praised it as a global model.

This paper presents suggestions and problems for Japan regarding global health strategies, including in regard to several prerequisite domestic preparations that must be made. They are summarized as follows.

(1) The UHC development should be promoted in coordination with the United Nations, World Bank, and Asian Development Bank. (2) The universal health insurance system of Japan can be a global model for UHC and ensuring its sustainability should be considered a national policy. (3) Trade agreements such as the Trans-Pacific Partnership (TPP) should not disrupt or interfere with UHC, the form of which is unique to each nation, including Japan. (4) Japan should disseminate information overseas, including to national governments, people, and physicians, regarding the course of events that led to the establishment of the Japan's universal health insurance system and should make efforts to develop international human resources to participate in UHC policymaking. (5) The development of separate healthcare programs and UHC preparation should be promoted by streamlining and centralizing maternity care, school health, infectious disease management such as for tuberculosis, and emergency medicine such as for traffic accidents. (6) Japan should disseminate information overseas about its primary care physicians (*kakaritsuke* physicians) and develop international human resources. (7) Global health should be developed in integration with global environment problem management. (8) Support systems, such as for managing large-scale disasters of international scale or preventing the spread of infectious diseases, should be developed and maintained. (9) International healthcare policy, which the Japanese government is trying to promote in accordance with international trends, and international development of Japanese healthcare industry should be reconsidered.

Key words Universal health coverage, UHC, Universal health insurance of Japan, *Kokumin-Kaihoken*, Global health, Post-2015 Development Agenda, TPP

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¹ Chief Senior Researcher, Japan Medical Association Research Institute (JMARI), Tokyo, Japan (hatanaka@jmari.med.or.jp).

² Chief Senior Researcher, Japan Medical Association Research Institute, Tokyo, Japan.

³ Researcher, Japan Medical Association Research Institute, Tokyo, Japan.

⁴ Executive Board Member, Japan Medical Association, Tokyo, Japan.

Background, Purpose, and Methods of the Study

Background and purpose

The Japanese government at present is implementing international health and medical growth strategies mainly from the viewpoint of business. However, using these strategies is potentially problematic: people from other countries might interpret the use of such strategies as an effort of international cooperation that is in favor of a certain business-biased class.

In the fall of 2015, the United Nations is set to resolve the Post-Millennium Development Goals (Post-MDGs) for after 2015; the main concept will be sustainability. The resolution will likely include the achievement of universal health coverage (UHC)*² as a specific development goal.

The foundation of the Japanese healthcare system lies in *Kokumin-Kaihoken*, a nationwide universal health coverage of public insurance system (hereinafter referred to as the JP-UHC) that has been highly evaluated by *the Lancet*. The World Bank also praised it as a global model. However, ensuring the sustainability of the Japanese healthcare system is a major issue: in addition to declining birth rates and the aging of Japanese society, for years, it has accumulated substantial financial deficits because of the stagnant economy.

Focusing on the JP-UHC program, this research aims to present proposals and challenges pertaining to Japan's global health*³ strategies, including in regard to prerequisite, domestic preparations that must be made.

Methods

As described as follows, the authors collected materials, which were organized, analyzed, and considered: the authors 1) collected publications and obtained information from the Internet, 2) attended relevant international and domestic conferences, and 3) interviewed experts within and outside of the Japan Medical Association (JMA).

Proposing global health strategies requires an understanding of the current status of developing countries and regions. Therefore, we also con-

ducted a schematic investigation and analysis of ASEAN countries, which are the main constituent members of the Confederation of Medical Associations in Asia and Oceania (CMAAO) and also geopolitically relevant to Japan.

Health Indicators in Japan and the ASEAN Countries

Health-related indicators in Japan

The Japanese healthcare system was ranked first overall in a ranking of the healthcare systems of all member states that the World Health Organization (WHO) published in 2000.¹ In contrast, the United States, which the Japanese healthcare system is often compared to for relative evaluation, was ranked 15th.

The Japanese healthcare system, along with Switzerland, received an A rating in a ranking of healthcare systems in 9 major countries that the Conference Board of Canada conducted in 2012.² The US was given a D rating.

Evaluation of the achievement of the MDGs among ASEAN countries

Many countries began to pursue the MDGs, development goals (including in regard to the eradication of poverty and hunger) to be achieved by 2015, in 1990. The MDGs have been widely recognized as international development goals (**Table 1**).³

By extracting major goals and targets and specific indicators for each MDG, the UN developed the following global assessment categories (as of 2014).⁴

Green: Target already met or expected to be met by 2015.

Yellow: Progress insufficient to reach the target if prevailing trends persist.

Red: No progress or deterioration.

Gray: Missing or insufficient data.

As a global comparison, Japan and eastern Asia have many green marks compared with southern Africa (Sub-Saharan Africa), southern Asia, western Asia, and Oceania, which have many yellow and red marks.

In regard to MDGs related to healthcare, south-eastern Asia received red marks for the following targets: "Reduce maternal mortality by

*² A healthcare system in which all people can receive necessary care without any concern over being reduced to poverty.

*³ Healthcare related to global issues that requires cooperation and collaboration across and beyond national boundaries.

Table 1 Millennium Development Goals (MDGs) (2000)

Goal 1	Eradicate extreme poverty and hunger
Goal 2	Achieve universal primary education
Goal 3	Promote gender equality and empower women
Goal 4	Reduce child mortality
Goal 5	Improve maternal health
Goal 6	Combat HIV/AIDS, malaria, and other diseases
Goal 7	Ensure environmental sustainability
Goal 8	Develop a global partnership for development

(Source: United Nations Millennium Project. MDGs.⁹)

three quarters” and “Access to reproductive health” under “Goal 5 Improve Maternal Health,” as well as “Halt and begin to reverse the spread of HIV/AIDS” under “Goal 6 Combat HIV/AIDS, malaria and other diseases.”

International Trends in Global Health and the UN’s Post-2015 Development Goals

Historical background of global health⁵

(Table 2)

*Epoch 1 <5>^{*4}: Establishment of the WHO*

After the WHO was established in 1948, international health initiatives begun by the League of Nations were further expanded.

Epoch 2 <12>: Clarification of the importance of primary health care in the Declaration of Alma-Ata

The Declaration of Alma-Ata, which became the foundation for international healthcare policy thereafter, was adopted in a joint meeting of the WHO and UNICEF in 1978. This was the first international declaration that clearly stipulated the significance of primary health care.

Epoch 3 <17, 21, 31>: Clarification of the importance of “sustainable development goals” in the Earth Summit

The UN Conference on Environment and Development of 1992 (also known as the Earth Summit, or UNCED)⁶ was held in Rio de Janeiro, Brazil; during the conference, treaties such as the Framework Convention on Climate Change and the Convention on Biological Diversity were signed.⁷ This meeting greatly influenced ideas about global environment protection and sustainable development. In response to this, the

3rd Conference of the Parties to the UN Framework Convention on Climate Change (also known as the COP3 or the Kyoto Conference) was held in 1997. In this conference, the Kyoto Protocol, which specified reduction targets for greenhouse gas emissions by 2012 based on 1990 as a reference year, was adopted. At the UN Conference on Sustainable Development in Rio de Janeiro in 2012, which was held as a follow-up meeting to the Earth Summit, participants agreed to integrate the sustainable development goals (SDGs) as part of the post-2015 development goals.⁸

Epoch 4 <22>: Establishment of MDGs in the UN Millennium Summit

The Millennium Declaration and MDGs were adopted at the UN Millennium Summit of 2000. Various goals to be achieved by 2015, including the eradication of poverty and hunger, were established; for most goals, 1990 was used as a reference year.

Epoch 5 <23, 28, 29, 30, 34, 37, 39, 44, 46>: Manifestation of activities aiming to make human security and UHC globally mainstream

Following the presentation of a final report by the Commission on Human Security to the UN Secretary-General in 2003,⁹ activities aiming to make UHC globally mainstream gained traction. The idea of fully encompassing primary health care, which is the basis of UHC, was established by the Commission on Human Security.

The Lancet issued a special issue entitled “Japan: Universal Health Care at 50 Years” in 2011,¹⁰ opening up the opportunity for Japan and the World Bank to begin a joint research project, the Japan-World Bank Partnership Program on UHC; the project has already issued

*4 Please note that the numbers in < > correspond to the numbers in Table 2.

Table 2 Historical background of global health and the Post-2015 MDGs

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
19th century	<1> (N/A)	• Diseases unique to tropical regions (tropical medicine) became increasingly studied in order to protect the health of Europeans living in colonial territories.
1868	<2> The International Committee of the Red Cross (ICRC) was launched	• International movements advance primarily in Europe.
1920	<3> The League of Nations Health Committee was established	• Efforts in international health advance worldwide.
1947	<4> The World Medical Association (WMA) was established	• On September 17, 1947, physicians from 27 countries gathered in Paris as part of a general assembly that led to the birth of the WMA.
1948	<5> The World Health Organization (WHO) was established	• The World Health Organization (WHO) was established. • The WHO Constitution led to the launch of special organizations in the United Nations (UN), further expanding efforts in international health.
1951	<6> The Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific (the Colombo Plan) was launched	• The Colombo Plan, which aimed to build a foundation for international cooperation, was launched.
1955	<7> The 1955 Afro-Asian Conference, also called the Bandung Conference, was held	• The Afro-Asian Conference was held in Bandung, Indonesia; the conference enhanced the international influence of African and Asian countries that had become independent from colonial rule.
1950s to 1960s	<8> The Basic Healthcare Approach (BHCA) was promoted; however, this approach retained an evident partiality toward large university hospitals	• Many Asian and African countries emphasized preventing disease in rural areas through the BHCA by promoting the deployment of quasi-physicians and/or health assistants; however, the approach continued to retain a partiality toward large university hospitals.
1961	<9> The Organisation for Economic Co-operation and Development (OECD) was established	• As the movement toward an organization to facilitate cooperation among countries in Europe and North America for the development of economic liberalism gained traction, the Organization for European Economic Cooperation (OEEC) was gradually disbanded and the Organisation for Economic Co-operation and Development (OECD) that exists today was established.
1974	<10> *The Japan International Cooperation Agency (JICA) was founded in Japan	• Japan became actively involved in international cooperation.
1975	<11> The WHO Executive Board adopted a resolution to promote primary health care (PHC)	• The 5th WHO Executive Board meeting adopted a resolution to promote PHC.
1978	<12> The Declaration of Alma-Ata, which emphasized the importance of PHC, was adopted at a joint meeting of the WHO and UNICEF	• The Declaration of Alma-Ata, a historical declaration that became the foundation of international healthcare policy thereafter, was adopted at a joint meeting of the WHO and UNICEF held in Alma-Ata, Kazakhstan in 1978. • A shared understanding in international health was reached in regard to "Health for All by the Year 2000." This brought about a historic paradigm change in international health. • The declaration emphasized human values and strongly advocated for the importance of international and domestic equality, health as a human right, the role of national governments, PHC, and international partnerships. • The declaration was the first international declaration to clearly specify the significance of PHC.
1986	<13> WHO Ottawa Charter for Health Promotion ¹¹ (also called the Ottawa Charter)	• In the Ottawa Charter for Health Promotion (a health strategy built upon the Declaration of Alma-Ata on PHC that was promulgated with the aim of achieving a global society in which all people can lead healthy lives), specific action plans based on "Health for All by the Year 2000" were developed.

(Table continued on next page)

Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
1986	<14> Chernobyl nuclear power plant accident	<ul style="list-style-type: none"> On April 26, 1986, an accident occurred at the No.4 reactor at the Chernobyl nuclear power plant, located in what was then the Ukrainian Soviet Socialist Republic. A total of 28 power-plant operators and firefighters died of massive radiation poisoning in the accident. About 135,000 residents who lived within a radius of 30 km from the nuclear power plant were evacuated or migrated. According to a report by the UN Scientific Committee released in February 2011, 25 years after the accident, over 6,000 children have developed thyroid cancer because of the accident and 15 of those had passed away by 2005.¹²
1990	<15> The inaugural issue of the UN Development Programme (UNDP) Human Development Report was published	<ul style="list-style-type: none"> Since 1990, the UNDP Human Development Report has advocated a “human development” approach: in this approach, it is argued that human development should aim to expand choices and opportunities available in people’s lives based on their self-will and that furthermore, the options essential to human life must be augmented. These options include being able to live a long, healthy life; fulfilling intellectual desires; and having the economic means necessary to live with a certain quality of life.
	<16> World Summit for Children	<ul style="list-style-type: none"> In the 1990s, the World Declaration on the Survival, Development and Protection of Children and the Plan of Action for Implementing the Declaration were formulated. Both indicated that children were a political challenge of the utmost priority. These action plans were aimed at creating welfare societies.
1992	<17> The UN Conference on Environment and Development (UNCED), also known as the “Earth Summit”	<ul style="list-style-type: none"> The UN Conference on Environment and Development was held in Rio de Janeiro, Brazil in June 1992. The conference positioned global environmental issues such as global warming and acid rain as common human issues. The aim of the conference was to facilitate both environmental protection and development under the philosophy of “sustainable development.” The conference achieved: (1) the adoption of the Rio Declaration on Environment and Development, (2) the signing of the UN Framework Convention on Climate Change, (3) the signing of the Convention on Biological Diversity, (4) the adoption of the Statement of Forest Principles, and (5) the adoption of Agenda 21.
1994	<18> International Conference on Population and Development (Cairo, Egypt)	<ul style="list-style-type: none"> People in general began to share ideas related to reproductive health: reproductive health was conceived of as being part of a state of complete physical, mental, and social well-being; reproductive health was conceived of as dealing with the reproductive processes, functions, and system at all stages of life—not merely the absence of reproductive diseases or infirmities. Reproductive rights were also considered: all couples and individuals were considered entitled to the basic right to decide, freely and responsibly, the number, spacing, and timing of their children and to have the information and means to do so; furthermore, all people were considered to have the right to attain the highest standards of sexual and reproductive health. The conference fomented a paradigm shift.¹³
1995	<19> World Summit for Social Development	<ul style="list-style-type: none"> At the World Summit for Social Development held in Copenhagen, Denmark, participating nations adopted a declaration and action plan that represented a new consensus about the need to put humanity at the center of development. At one of the largest gatherings of national leaders worldwide, 117 heads of state or government pledged that their most important goals were to conquer poverty, achieve full employment, and foster stable, safe, and just societies.

(Table continued on next page)

Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
1996	<20> New development strategies were undertaken by the OECD	<ul style="list-style-type: none"> Based on the realization that the autonomous efforts are key to successful development and that development assistance plays an important supplementary role, the OECD Development Assistance Committee (DAC) adopted new development strategies with several goals, including halving the population of poor people worldwide before 2015 and having elementary education available in all nations.
1997	<21> The 3rd session of the Conference of Parties to the UN Framework Convention on Climate Change (COP3), and the establishment of Kyoto Protocol	<ul style="list-style-type: none"> The Kyoto Protocol established reduction targets to be achieved by 2012 for greenhouse gas emissions in developed countries and nations transitioning to a market economy were set, based on 1990 as a reference year. This constituted humanity's first step to addressing the problem of global warming in the mid-to-long term in the 21st century and after.
2000	<22> UN Millennium Summit, UN Millennium Declaration, and UN Millennium Development Goals (MDGs)	<ul style="list-style-type: none"> In the UN Millennium Declaration, governments agreed on 8 issues: (1) values and principles, (2) peace, security, and disarmament, (3) development and poverty eradication, (4) the protection of the shared environment, (5) human rights, democracy, and good governance, (6) the protection of vulnerable groups, (7) the special needs of Africa, and (8) strengthening the UN. Various Millennium Development Goals (MDGs) to be achieved by 2015 were established, including the eradication of poverty and hunger; 1990 was the reference year for many goals. MDGs soon became common development goals for the entire international community; they have exerted a major influence in regard to government policies on international cooperation and development and on public opinion.
2003	<23> Submission of the Commission on Human Security's final report to the UN Secretary-General	<ul style="list-style-type: none"> In response of a request from Japan at the 2002 UN Millennium Summit, the Commission on Human Security was launched with Ms. Sadako Ogata and Mr. Amartya Sen as co-chairs. The Commission on Human Security's final report was submitted to UN Secretary-General Kofi Annan in 2003. The final report focused on individuals and communities, emphasizing the need to protect and empower each individual person.
2005	<24> *The Health and Development Initiatives (HDIs): Japan's contribution toward achieving the health-related MDGs	<ul style="list-style-type: none"> In order to further contribute to the achievement of the MDGs, Japan presented the idea of the HDIs and announced financial aid totaling 5 billion USD over 5 years based on the HDIs at the High-Level Forum on Health MDGs in Asia and the Pacific (June 2005). Based on the HDIs, Japan has helped developing nations in achieving the health-related MDGs.
2008	<25> The 4th Tokyo International Conference on African Development (TICAD IV)	<ul style="list-style-type: none"> The establishment of human security and health issues in Africa, including as part of achieving the MDGs, was discussed at the conference. Discussion at the conference emphasized the importance of human resources in healthcare and cooperation.
	<26> The G8 Hokkaido Toyako Summit	<ul style="list-style-type: none"> The summit addressed global issues in international health; presented specific action plans toward achieving international goals, such as the MDGs, that governments have already agreed upon; and affirmed the promotion of comprehensive strategies to supplement existing efforts.

(Table continued on next page)

Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
2011	<27> Accident at the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi Nuclear Power Plant	<ul style="list-style-type: none"> • After the Great East Japan Earthquake and subsequent tsunami, the TEPCO Fukushima Daiichi Nuclear Power Plant experienced a very serious accident that was rated a 7 on the International Nuclear Event Scale. • As a result, a large amount of radioactive materials were released into the atmosphere. • As of June 7, 2012, 163,000 had evacuated from Fukushima Prefecture due to the tsunami and nuclear power plant accident. • As of September 2012, 501 people had been subject to secondary thyroid inspections.
	<28> The 64th World Health Assembly Resolution on Universal Coverage	<ul style="list-style-type: none"> • In response to the 2010 World Health Report, "Health Systems Financing: The Path to Universal Coverage," the WHO adopted the WHA Resolution on Sustainable Health Financing Structures and Universal Coverage at its 64th assembly.
	<29> A special issue of <i>the Lancet</i> , "Japan: Universal Health Care at 50 Years," was published	<ul style="list-style-type: none"> • This special issue was published to mark the 50th anniversary since the achievement of UHC in Japan and disseminate information regarding the Japanese experience with the international community. • The issue presented scientific analysis pertaining to the factors that contributed to realizing a society conducive to longevity in Japan; the advantages and limitations of the JP-UHC system; the reality of high-quality, low-cost healthcare; success and challenges in regard to long-term care insurance that had arisen in Japanese society given its rapid aging; and the role and predominance of Japan in health diplomacy. • This was the first special issue of <i>the Lancet</i> to feature a single advanced nation.
2012	<30> Japan and the World Bank initiated a joint research program on universal health coverage (UHC)	<ul style="list-style-type: none"> • In January 2012, a research project was initiated with the aim of comprehensively reviewing all approaches to realizing and sustaining UHC from both the aspects of finance and human resources (for the provision of services). • The results were summarized and published in "Universal Health Coverage for Inclusive and Sustainable Development: A Synthesis of 11 Country Case Studies" and "Universal Health Coverage for Inclusive and Sustainable Development: Lessons from Japan."
	<31> UN Conference on Sustainable Development (Rio + 20) and Sustainable Development Goals (SDGs)	<ul style="list-style-type: none"> • The UN Conference on Sustainable Development, also known as "Rio + 20," was held in Rio de Janeiro, Brazil in June 2012. As the follow-up meeting to the 1992 UN Conference on Environment and Development, which greatly influenced how global environmental protection and sustainable development are currently conceptualized (as seen in the Framework Convention on Climate Change and the Convention on Biological Diversity), Rio + 20 resulted in the outcome document "Future We Want." • Rio + 20 declared its support for achieving the MDGs through increasing incomes, making decent work available, eradicating poverty, and pursuing a sustainable green economy able to protect the health of the environment. • Governments agreed to launch an inter-governmental negotiation process regarding SDGs and to organize and integrate SDGs into the Post-2015 development goals.

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Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
2012 to 2013	<32> A report was issued by the UN High-level Panel	<ul style="list-style-type: none"> In July 2012, the UN Secretary-General established the High-Level Panel of eminent persons on the Post-2015 Development Agenda, responsible for advising the UN Secretary-General in discussions regarding the establishment of the Post-2015 development goals. In May 2013, the Panel submitted its report to the UN Secretary-General regarding the Post-2015 development goals. According to the report, the Post-2015 development goals should be founded on respect for universal human rights, the purposes of MDGs should be achieved, and extreme poverty should be eradicated by 2030.
2013	<33> The 5th Tokyo International Conference on African Development (TICAD V) <34> *Prime Minister Abe published a paper entitled "Japan's Strategy for Global Health Diplomacy: Why It Matters."	<ul style="list-style-type: none"> With the central tenets of a "robust and sustainable economy," "inclusive and resilient society," and "peace and stability," the TICAD V addressed some new themes in the area of healthcare, including UHC; it also introduced the concept of "bottom of the pyramid" business based on health-related opportunities (such as in regard to water and nutrients) to target the 4 billion low-income people in the world. Following international trends, Japan has positioned international health as a key issue in Japanese diplomacy: manifesting the idea of "human security," the aim is to make basic healthcare services available to everyone in the world (i.e., under the auspices of UHC) by bringing Japanese experience and knowledge to bear. <i>The Lancet</i> published a paper contributed by Prime Minister Abe regarding diplomatic strategies in international health. This was the first time a paper on international health was published by a world leader in the G8. The paper indicates that to ensure global health, the aim must be to make basic healthcare services available to everyone in the world (i.e., under the auspices of UHC) and that it is important to have comprehensive measures in place. It was made clear that health is considered a pillar of diplomacy in Japanese foreign policy and that the country seeks to promote UHC.
	<35> *Development of diplomatic strategies in international health in Japan	<ul style="list-style-type: none"> Contributing to health issues that the world has in common has been positioned as the key issue in Japanese diplomacy; the plan is to strengthen efforts toward achieving global UHC, i.e., making basic healthcare services, including preventive medicine, treatment, and rehabilitation, available for everyone as needed at an affordable cost. Progress toward achieving MDGs in maternal and child health has been delayed in some regions of the world including sub-Saharan Africa, necessitating continuing efforts from Japan. New and effective development goals must be developed, considering that there are new issues not covered in the MDGs (e.g., diabetes, non-infectious diseases such as cancer, and population aging) that increasingly need to be addressed.
	<36> The UN Secretary-General Ban Ki-moon's report on the Post-MDGs Development Agenda, "A Life of Dignity For All"	<ul style="list-style-type: none"> UN Secretary-General Ban released "A Life of Dignity For All: Accelerating Progress towards the Millennium Development Goals," a report on the Post-MDGs Development Agenda. The report presented his vision of the Post-MDGs Development Agenda while referring to the report submitted to him by the High-Level Panel of eminent persons on the Post-2015 Development Agenda on May 31, 2013 entitled "A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development."

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Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
2013	<37> The special events on MDGs at the 68th UN General Assembly, and its side event "What People Want: A Report from the Global Conversation On the Post-2015 Agenda"	<ul style="list-style-type: none"> In the 68th UN General Assembly, Prime Minister Abe pointed out the importance of UHC and the mainstreaming of disaster prevention in relation to MDGs. The UN General Assembly and United Nations Development Group (UNDG) held a side event on the Post-2015 development goals and health. The usefulness of UHC (i.e., the fact that UHC enables every person to receive basic healthcare services) in context of the Post-2015 development goals was discussed. UHC can meet diverse health needs and can contribute to realizing a more equitable society; its importance was reconfirmed. Conceptualizing what human security as well as UHC that manifests human security is crucial to deal with challenges pertaining to achieving the MDGs in the health sector for which solutions have been delayed. These ideas should be made clear in the Post-2015 development goals.
	<38> Special events on MDGs	<ul style="list-style-type: none"> An outcome document was adopted at the special events on MDGs hosted by the UN General Assembly Chair. With the nearing of the target year for the MDGs, the preamble to these events made clear that the commitment to reach the goals had to be renewed and efforts to reach the goals had to be strengthened to ensure achievement by 2015. Among other things, the text calls for the acceleration of progress, indicates importance of promoting global partnership for development, and states 6 items related to the Post-2015 development goals.
	<39> Global Conference on Universal Health Coverage (a conference of ministers and top experts)	<ul style="list-style-type: none"> Co-hosted by the Government of Japan and the World Bank, a conference of ministers and top experts on health policy was successfully held in Tokyo to recapitulate the Joint Research Program of Japan and the World Bank Group on Health and to share experiences and issues pertaining to UHC in developing countries. This was the first international conference of this nature to take place, not to mention the first in Japan.
2014	<40> Report by the Open Working Group of the General Assembly on SDGs	<ul style="list-style-type: none"> The report presented development goals and targets. These later formed the framework for UN Secretary-General Ban's general report on sustainable development, entitled "The Road to Dignity by 2030." The report listed 17 development goals; Goal 3 proposed to "ensure healthy lives and promote well-being for all at all ages."
	<41> The WHO Secretary-General declared "a public health emergency of international concern" in response to the Ebola outbreak in West Africa	<ul style="list-style-type: none"> Based on available information, the Emergency Committee of International Experts unanimously agreed that the Ebola crisis in Guinea, Liberia, Sierra Leone, and Nigeria constituted "a public health emergency of international concern." On August 8, 2014 the WHO Secretary-General endorsed the Committee's recommendation and declared the Ebola outbreak in West Africa an international public health emergency.
	<42> Intergovernmental Panel on Climate Change (IPCC) 5th Assessment (Integration) Report	<ul style="list-style-type: none"> The report summarized the main points of the most comprehensive climate change study, which was undertaken by over 800 researchers. The results of this study had been published in the previous 13 months prior to the publication of this report. The report pointed out more clearly than did previous assessments that human factors, including greenhouse gas emissions, are the main cause of the global warming that has been observed since the mid-20th century. According to the report, global emissions must be reduced to 40-70% of 2010 levels by 2050 and be down to zero by 2100 in order to fully ensure that warming can be controlled within 2°C.

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Table 2 Historical background of global health and the Post-2015 MDGs (continued)

Year	Event (conferences, declarations, resolutions, reports, etc.)	Description
2014	<43> The UN Secretary-General's general report for sustainable development, "The Road to Dignity by 2030," was released	<ul style="list-style-type: none"> In December 2014, the advance version of "Synthesis Report of the Secretary-General on the Post-2015 Sustainable Development Agenda" was submitted to the UN General Assembly. It called for inclusive, agile, and concerted actions to realize an era of sustainable development for all people. The report placed humanity and the planet at its center; the expectation was that it would guide the development of a new global agenda. The report also welcomed the outcome document of the Open Working Group, stating that the 17 SDGs and 169 targets proposed in the document should become the foundation for new post-2015 goals.
2015	<44> G7 members UK, Germany, France, and Italy opted to participate in the Chinese-led Asian Infrastructure Investment Bank (AIIB)	<ul style="list-style-type: none"> The UK announced its decision to join the China-led AIIB with the anticipation of becoming a founding member; it was the first among the G7 nations to choose membership. Germany, France, and Italy also announced their participation. The AIIB will compete against the existing Asian Development Bank led by Japan. It is likely to have a major impact on the International Monetary Fund and the World Bank, which are closely tied to the Asian Development Bank.
	<45> Prime Minister Abe announced the Sendai Cooperation Initiative for Disaster Risk Reduction at the 3rd UN World Conference on Disaster Risk Reduction	<ul style="list-style-type: none"> The World Bank has sought to reduce poverty, hunger, and disease; Japan is actively involved in the World Bank's efforts through cooperation in regard to UHC. The Sendai Cooperation Initiative for Disaster Risk Reduction is another effort by Japan to actively support the World Bank's measures.
	<46> WMA Council Resolution on Trade Agreements and Public Health	<ul style="list-style-type: none"> In April 2015, the WMA Council Resolution on Trade Agreements and Public Health was adopted by the 200th WMA Council Session held in Oslo, Norway. Its preamble specifies that "[trade agreement] Negotiations should take account of their potential broad impact especially on health and ensure that health is not damaged by the pursuit of potential economic gain." One of its recommendations to National Medical Associations is to "Ensure trade agreements do not interfere with governments' ability to regulate health and health care, or to guarantee a right to health for all. Government action to protect and promote health should not be subject to challenge through an investor-state dispute settlement (ISDS) or similar mechanism."
	<47> (Scheduled) UN General Assembly Post-2015 Development Agenda Resolution	<ul style="list-style-type: none"> Reviewed from various viewpoints, the Post-2015 Development Agenda is expected to be adopted to succeed the current MDGs.
	<48> (Scheduled) The 21st session of the Conference of Parties to the UN Framework Convention on Climate Change (COP21) (Paris, France)	<ul style="list-style-type: none"> At the upcoming COP21 in 2015, the international community, including those nations that did not participate in the Kyoto Protocol (such as China and the United States), is expected to agree on an international framework for climate change for 2020 and after.
2016	<49> (Scheduled) 2016 G7 Summit (to be held in Japan)	<ul style="list-style-type: none"> In 2016, the G7 Summit will be held in Japan for the first time in 8 years. It will be the first G7 Summit after the resolution of the UN General Assembly Post-2015 Development Agenda and the COP21. It is expected that, in concert with the promotion of UHC by the UN, World Bank, and Japan, UHC will become mainstreamed as an international development trend.

Note: The asterisk (*) indicates independent actions of Japan.

Note: The grayed-out cells framed in thick lines indicate significant global actions.

its final report.¹⁴ In 2013, Prime Minister Abe published a paper entitled “Japan’s strategy for global health diplomacy: Why it matters.”¹⁵ In the same year, some proactive activities aiming to make UHC the global mainstream took place, such as a side event to the 68th UN General Assembly, “Post-2015: Health and Development,”^{16,17} and the Global Conference on Universal Health Coverage for Inclusive and Sustainable Growth,¹⁸ which was attended by ministers and top experts in health policy and in which Japan played a major role.

Considering China’s moves to establish the Asian Infrastructure Investment Bank (AIIB), the promotion of UHC modeled after the JP-UHC program is extremely important to raising the profile of the World Bank and the Asian Development Bank, in which Japan is strongly influential.

Furthermore, the World Medical Association (WMA) Council Resolution on Trade Agreements and Public Health¹⁹ was adopted at the 200th WMA Council session in Oslo, Norway, in April 2015. This resolution ensures that trade agreements such as the TPP “do not interfere with governments’ ability to regulate health and health care, or to guarantee a right to health for all.”

Epoch 6 <42, 43, 47, 48>: Plan to resolve the Post-2015 Development Agenda, which includes UHC that revolves around the planet (environment) and humanity

The UN General Assembly is expected to resolve the Post-2015 Development Agenda, which will be inclusive of goals for UHC, in the fall of 2015. Based on a general report by the UN Secretary-General entitled “The Road to Dignity by 2030,”²⁰ the Post-2015 Development Agenda will be oriented toward sustainable development and will be conceptually based on a consideration of the planet (environment) and humanity.

Furthermore, the 21st session of the Conference of Parties to the UN Framework Convention on Climate Change (COP21) will be held in Paris at the end of 2015; in this session, a new international agreement regarding the framework for CO₂ emission reduction targets for 2030 is expected to be achieved.

Epoch 7 <27, 41, 45>: Mainstreaming an awareness of global threats such as emerging and re-emerging infectious diseases, large-scale natural disasters, and nuclear disasters as the global health problems

The WHO Secretary-General declared in 2014

that the Ebola outbreaks, in which Ebola hemorrhagic fever spread at an unprecedented scale in West Africa, constituted a public health emergency of international concern. As the example of the avian flu also demonstrates, it is evident that infectious disease control remains a very important issue for global health.

Large-scale hurricanes and typhoons are growing in number; these are also a global health concern. Large-scale earthquakes induced at plate subduction zones and epicentral earthquakes in populated inland areas may also cause tsunamis. The potential for nuclear power plant accidents is also rapidly increasing. Disaster management at the global scale should be made a mainstream global health issue.

Development trends in the UN Post-2015 Development Goals

In December 2014, the UN Secretary-General Ban Ki-moon submitted an advance version of “Synthesis Report of the Secretary-General on the Post-2015 Sustainable Development Agenda” to the UN General Assembly.²⁰ The summit and the UN General Assembly in September 2015 are expected to adopt a resolution with places humanity and the planet at its core and to develop a new global agenda based on human rights; the UN Secretary-General’s report will serve as a draft. In concert with the announcement of the synthesis report, the Secretary-General also presented 17 sustainable development goals proposed by the open working group.²¹

The Post-2015 Sustainable Development Agenda that will be resolved at the summit and the UN General Assembly in September 2015 will likely strongly reflect the principles for development goals and health issues considered by the open working group. In the UN Secretary-General’s report, development goals and targets related to UHC are also laid out (Table 3).²¹

Historical Background of Healthcare Policy in Japan and Suggestions for ASEAN Countries

Evaluation axes to achieve UHC and 4 principles to realize UHC as advocated by the WHO

When all people can receive good quality healthcare (including preventative medicine, health promotion, medical treatment, rehabilitation,

Table 3 Extracted text pertaining to UHC from the “Report on Sustainable Development Goals” proposed by Open Working Group under “Goal 3: Ensure healthy lives and promote well-being for all at all ages”²¹

- 3.7 By 2030, ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- 3.8 Achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all

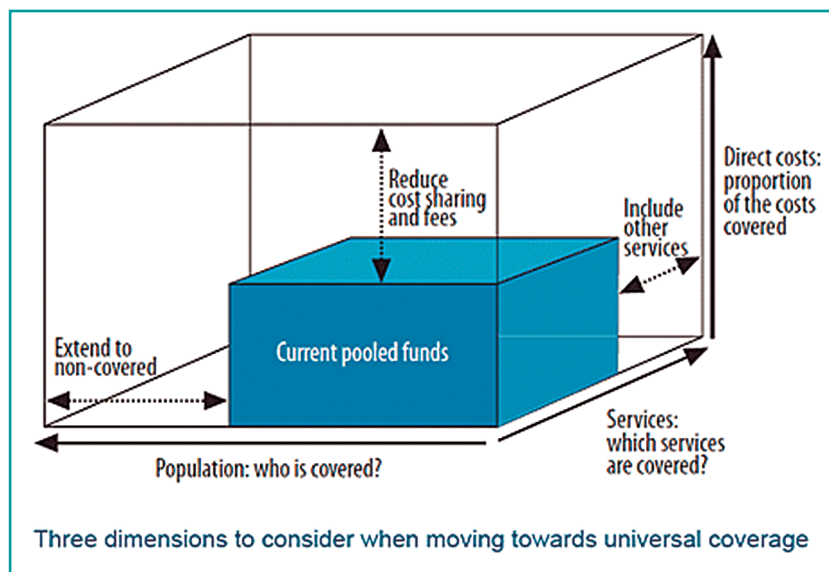


Fig. 1 The 3 dimensions of universal coverage as proposed by the WHO²³

palliative care, etc.) without any concern over being reduced to poverty, we can say that UHC has been achieved. Moving towards UHC requires progress on 3 fronts: the range of services that are available, the proportion of the costs of those services that are covered, and the proportion of the population that is covered (**Fig. 1**).^{22,23,24}

Four key ingredients:

1. Equitable access must be promoted by removing financial barriers, especially direct payments.
2. Prepayment must be compulsory.
3. Large risk pools are essential.
4. Governments need to cover health costs for people who cannot afford to contribute.

Characteristics of the JP-UHC program

The JP-UHC program of Japan guarantees free access to healthcare for all people in Japan, anywhere and whenever, regardless of their income level. The program is able to provide for all people through the public health insurance system, which is supported by the employee insurance and community insurance programs. Japan is regarded as having achieved UHC and its system and programs are believed to be fully mature.¹⁴

Events leading up to the establishment of the JP-UHC system

Health insurance system before World War II

Before World War II, the health insurance sys-

tem in Japan was modeled after the German system, although it was in the style of social insurance. The Health Insurance Act, which applied only to certain workers, was established in 1922. This was the beginning of the employee insurance program.

Meanwhile, the problem of poverty in rural areas was surfacing as a social issue. Because healthcare costs were a financial burden for farmers, National Health Insurance Act was passed in 1938 and came into effect within the same year. (This pre-war version of the act is hereinafter referred to as the “old National Health Insurance Act.”) Soon after, Japan entered a state of war, and the government increasingly put its efforts into the national health insurance program to promote its Healthy Soldiers and Healthy People policy.

Establishment of the JP-UHC program after World War II

After World War II ended, the Constitution of Japan was promulgated in 1946. Article 25 of the Constitution states that “All people shall have the right to maintain the minimum standards of wholesome and cultured living.” The right to live was therefore stipulated.

During the economic depression after the World War II, the national health insurance program faced widespread delinquency in regard to insurance premiums. In addition, inflation sent healthcare expenditures soaring, forcing the program into a tight corner. In light of this, the national health insurance program was reformed in 1948; operational responsibility for the program was, in principle, shifted from unions to municipalities. Moreover, joining the program became compulsory for those who lived in municipalities participating in the national health insurance program.

The old National Health Insurance Act was entirely revised in 1958; the new National Health Insurance Act was put in effect. This new act required, in principle, all municipalities to participate in the health insurance program as part of a national project. The JP-UHC was fully achieved in 1961, when all municipalities had joined the program.

Several major differences existed between the old and the new National Health Insurance Acts. The new act obligated municipalities to participate in and manage the national health insurance program; to ensure universal coverage,

all municipal residents were required to join the program unless they were already covered by the employee insurance program.²⁵ In addition, under the old act, the national program offered significantly poorer benefits compared to the employee insurance program; the new act made the benefits offered by the national program equal and, furthermore, increased the benefit ratio.

Historically speaking, the financial burden of the employee insurance program was lighter and its benefits were greater compared with the national insurance program. This gap was questioned from the viewpoint of equality. Moreover, for many years, copayments per visit differed between the 2 programs. These 2 programs were completely equalized relatively recently, in 2003.

Changes in policyholders (by insurance program)

The first health insurance law in Japan was the Health Insurance Act of 1922, which was applicable only to people in certain workplaces such as factories, mines, and the offices of transportation companies; the act covered only 3% of the entire population.

The Ministry of Health and Welfare was established in 1938 and the old National Health Insurance Act was enacted in the same year. Health insurance membership reached 9.9% of the population in the following year. In 1939, the Mariners Insurance Act and Office Workers Health Insurance Act were enacted, providing health insurance to sailors as well as people working in business and financial offices. With the revised old Health Insurance Act, family members of policyholders became eligible to receive health insurance benefits; they could join voluntarily.

The range of those eligible for health insurance programs rapidly expanded from 1940 to 1943; this was in part because in 1941, Japan entered the early phase of World War II. The old Health Insurance Act was again revised in 1942 to incorporate the Office Workers Health Insurance Act and to make family membership, which was formerly voluntary, mandatory; by 1943, 74.6% of the population was enrolled (Fig. 2).^{26,27,28}

Japan was defeated in World War II in 1945; by 1949, membership had considerably dropped, to 55.9%.

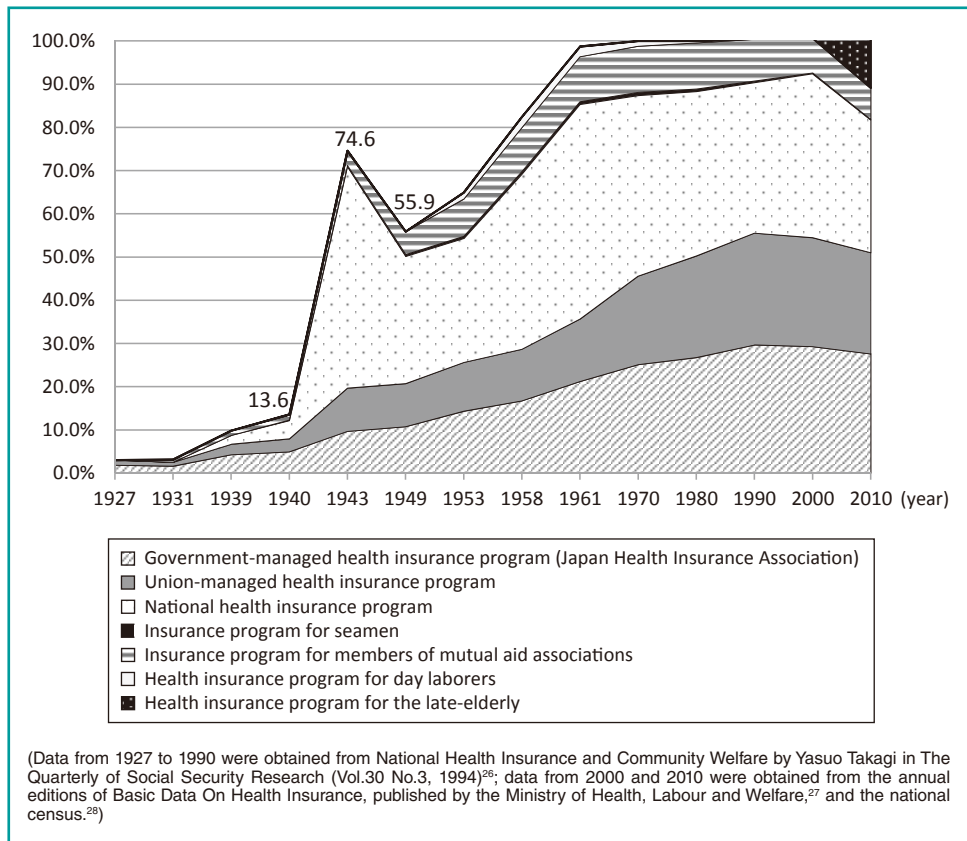


Fig. 2 Changes in the proportion of health insurance policyholders out of the national population (by insurance program)

Please note that the data on the health insurance program for day laborers are pursuant to the provision of Article 3, Paragraph 2 of the Health Insurance Act.

Please also note that the health insurance program for the late-elderly was initiated in 2008. The data on total population size are based on the national census for Japanese citizens.

Complementary health policies

In addition to its insurance program, Japan implements many unique health policies in regard to maternal and child health management, school health management, infection control (such as for tuberculosis), and emergency medicine for traffic accidents. In reviewing the current health standards and considering future policies in ASEAN countries, Japan's experience with health policies will likely be very useful.

Health policies in regard to maternal and child health may be taken as an example. After World War II, an administrative section in charge of public health for mothers and children was established on the orders of General Headquarters (GHQ), which also lent its sup-

port. The war-era "Handbook for Expected Mothers" was revised and a new "Maternal and Child Handbook" was introduced (this handbook was renamed the "Maternal and Child Health Handbook" in 1966). It is believed that the introduction of the "Maternal and Child (Health) Handbook" greatly contributed to improving maternal and child health.

School health management has a long history in Japan, beginning in 1872, when the school system was established following the end of the rule of the samurai in the Meiji Restoration. The school physician system was promulgated in 1898; 1 school physician was stationed at each public school nationwide.

After World War II, school health was

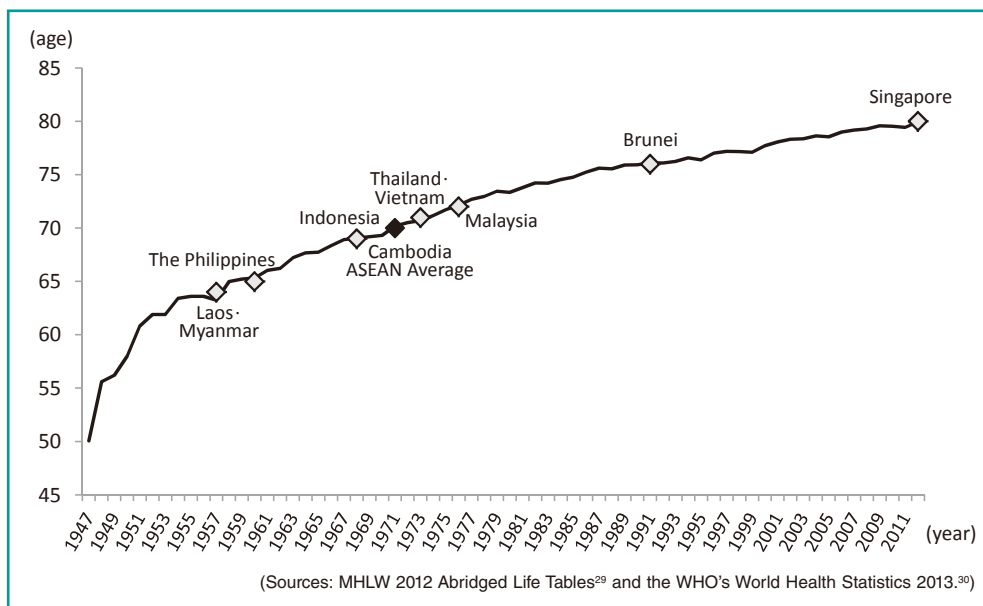


Fig. 3 Changes in average life expectancy for males in Japan and standards in ASEAN countries

focused on tuberculosis control (using the tuberculin reaction test and the BCG vaccine) and roundworm control (using pinworm egg inspection and antiparasitic treatment). As illustrated in these examples, through school health, Japan has accumulated considerable child health experience in the school, home, and community contexts.

Comparison of main health indicators between Japan and ASEAN countries

Comparing the current average life expectancy in ASEAN countries against historical changes in Japan, the current average life expectancy for men in ASEAN countries roughly corresponds to the period between 1945 and 1955 in Japan (Fig. 3).^{29,30}

In Laos and Myanmar, which have been experiencing low levels of economic development, the infant mortality rate roughly corresponds to the period between 1950 and 1958 in Japan. Other figures from many other countries can be considered to correspond to the period between 1963 and 1972 in Japan.

Since the 1940s, maternal mortality in Laos, Myanmar, Indonesia, and Cambodia has been similar to that in the period between 1940 and 1945 in Japan (Fig. 4).^{30,31}

Tuberculosis morbidity in Laos and Myanmar is similar to that between 1955 and 1964 in Japan, but in Cambodia, which economic level is still low, tuberculosis morbidity remains serious—at levels equivalent to before 1953 in Japan. Tuberculosis morbidity in Indonesia is close to that in Japan in 1965, which is average for ASEAN countries. Singapore and Brunei have experienced high levels of economic development, but tuberculosis morbidity (73 and 94 persons per 100,000 people, respectively) in these countries, while not poor, roughly corresponds to that in Japan in 1978 (Fig. 5).^{30,32,33}

Japanese healthcare policy's contribution to economic development and suggestions for ASEAN countries

Japan underwent rapid economic growth after World War II. The two decades between 1954 and 1973 in particular are referred to as the high economic growth period; in this period, annual economic growth rates (real rates) were around 10%.

The Japanese experience suggests that it is important for the ASEAN countries to make the protection of national health a national goal in order to achieve future economic growth. The introduction of a nationally standardized

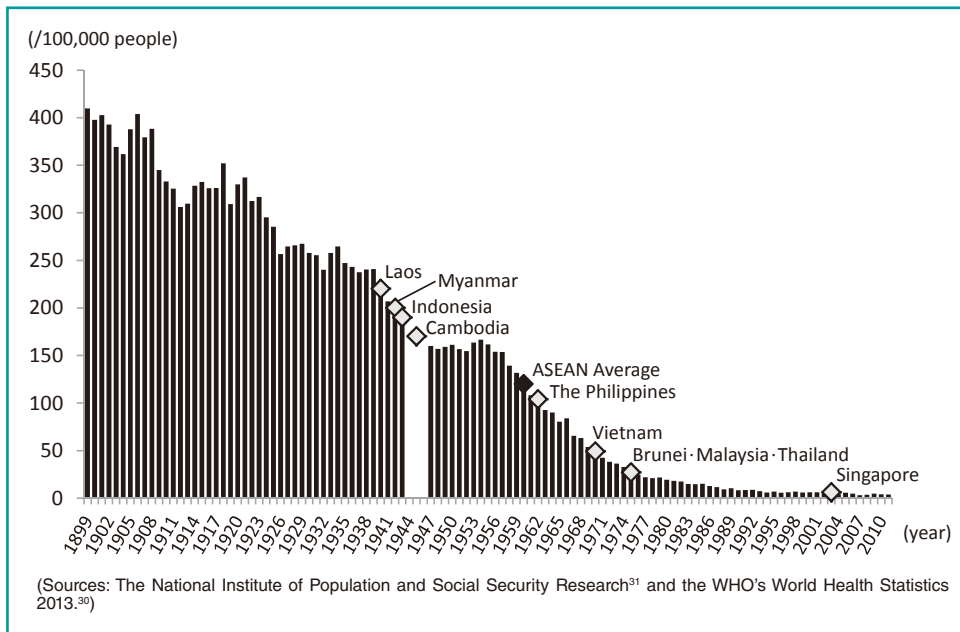


Fig. 4 Maternal mortality rate (per 100,000 people)

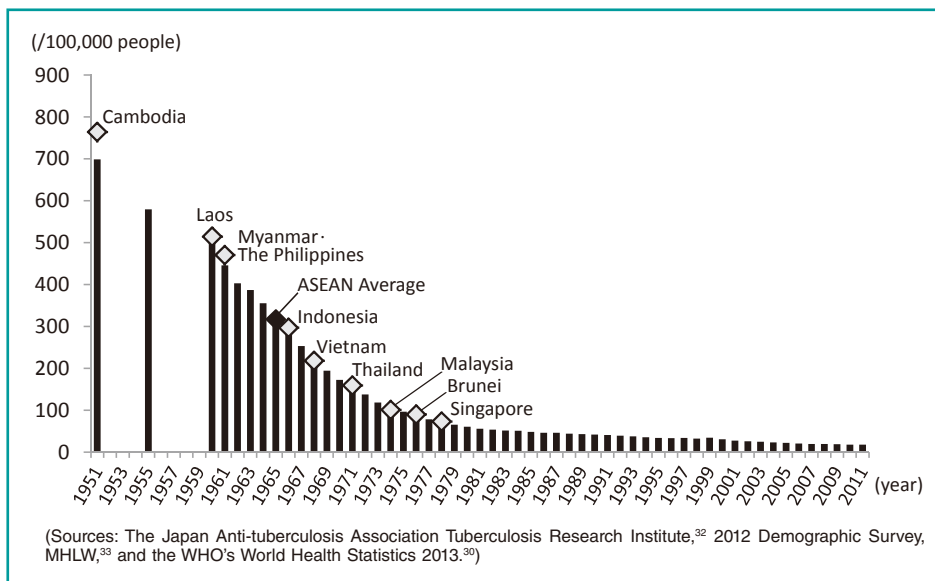


Fig. 5 Tuberculosis morbidity (per 100,000 people)

health insurance system and the preparation of healthcare provision standards—i.e. UHC—are essential as a first step. Protecting the health of workers and all citizens can ensure countries a stable future workforce and facilitate economic

growth.

In addition, providing healthcare requires securing human resources in regard to healthcare, including physicians. Developing such human resources takes time. To ensure a solid

Table 4 Petition to Minister of Health and Welfare Masa Nakayama from Japan Medical Association President Taro Takemi (Submitted on August 18, 1960)

1. Lift restrictions in medical practice
Correct the manual in the guidelines; medical practice should be based on principles and case-by-case treatment should be provided according to the physician's discretion. The government standards should therefore be lifted. Physicians should be free to use any medications legally available on the Japanese market.
2. Raise the unit price in the medical fee schedule.
3. Relax the complicated clerical process.
4. Consolidate Tables 1 and 2 of the medical fee schedule and eliminate regional differences

(Source: Journal of Japan Medical Association. 1960;44(4):1.³⁵)

training system, it is therefore recommended that training institutions with appropriate training staff be established to secure such resources.

Implementing government policies that are complementary to the health insurance system is also essential.

Achievements of the JMA Related to the Establishment of the JP-UHC Program and the JMA's Contribution to International UHC

Activities and contributions related to the JP-UHC program

Response to the double-registration system

To bring the nation closer toward achieving the JP-UHC program, the Health Insurance Act was revised in April 1957 and a double-registration system for physicians and medical institutions was implemented. In the same month, the JMA, which had been opposed to the revision of the act on the grounds that the double-registration system would damage the physician-patient relationship, negotiated with the Minister of Health and Welfare and won a concession: the Minister agreed that JMA would review the text of the revised law before it was officially passed.

In addition, the JMA opposed revision because the revised law was to stipulate the number of patients a physician should see in a day and was to indicate doses for medicines and injections in detail, which would have limited physicians' discretion if realized.

Activities toward lifting restrictions on medical practice

In the government healthcare program, a conditional reimbursement system is used: the term "medical care practices with restrictions" refers

to the fact that only treatments and prescriptions that meet governmental guidelines (called the medical care rules) are reimbursed according to the official medical fee schedule; other medical practices are not reimbursed.³⁴ The government provided a list of medications that physicians could use by disease and in descending order of priority; daily doses of medications with proven effects were also limited.

In August 1960, the year before UHC was achieved in Japan, the JMA submitted to the Minister of Health and Welfare a letter of petition outlining 4 prerequisites that would need to be fulfilled before the JP-UHC program could be initiated, claiming that initiating the program as it was would eradicate respect for life and academia, sacrifice people's welfare, and strengthen the power of the self-righteous, totalitarian bureaucrats in charge of the insurance program (**Table 4**).³⁵

However, the pay rise in the medical fee schedule that was requested in the petition was never realized; moreover, the lifting of the care restrictions was deferred. Consequently, the JMA instructed physicians across the nation to temporarily close their practices in February 1961. In response to this, the 3 highest officials in the Liberal Democratic Party (LDP), the JMA president, and the president of the Japan Dental Association held a conference at the end of the same month; subsequently, the government agreed to partially relax the care restrictions.

When the Minister of Health and Welfare failed to fulfill this agreement as promised, the JMA announced that all physicians (including dentists) would withdraw their registrations as government insurance physicians after August of the same year. As a result, the Minister of Health

and Welfare and the LDP's three highest officials repeatedly negotiated until the 4 items in the JMA's petition were agreed upon; consequently, the JMA canceled its withdrawal campaign.

The Roundtable Conference on Healthcare was then established as part of acquiescence to the JMA's four demands. The conference enabled the relaxation of care restrictions (a de facto lifting of care restrictions) in November and an additional pay rise in the medical fee schedule in December of that year.

Correction of the plan for a universal coverage system proposed by the government

Taro Takemi, the JMA president at the time, believed that the movement toward a universal coverage system was unstoppable.³⁶ He did not oppose the introduction of the system itself as he had believed that the Japanese social security system would gradually enter maturity. However, he also believed that the universal coverage system the government had proposed allowed for too much bureaucratic interference, which would impair physicians' professional freedom. His actions were intended to eliminate such interference and force revisions to the governmental plan.

JMA's international activities

Activities in the WMA

The WMA was created in September 1947 to "serve humanity by endeavoring to achieve the highest international standards in Medical Education, Medical Science, Medical Art and Medical Ethics, and Health Care for all people in the world."³⁷

Recently, the Proposed WMA Statement on Trade Agreements and Public Health was adopted as the WMA Council Resolution at the 200th WMA Council Session held in Oslo, Norway in April 2015. This resolution recommended that trade agreements include exclusions to prioritize the protection of public health over commercial interests and that government action in the interest of public health should take priority over trade agreements.¹⁹

Activities in the CMAAO

The first CMAAO congress met in Tokyo, Japan in April 1959.³⁸

At the 44th CMAAO Mid-term Council in 2008, the JMA reported that the JMA and its four affiliated hospital organizations had developed the Voluntary Action Plan of Global Warming Measures in Hospitals in August 2008

and that the JMA had adopted the action plan as an executive decision in response to the Cabinet decision to adapt the Kyoto Protocol Target Achievement Plan.³⁹

Since it was held during the worldwide economic crisis that set in after the Lehman shock, the main theme of the 2009 General Assembly in Bali was the impact of the global financial crisis on the health system. The JMA presented a lecture entitled "Japanese Healthcare System to Protect the Public from the Global Financial Crisis" and reported that the social unrest triggered by concerns over healthcare experienced in other nations, such as the US, had not occurred in Japan largely because of the JP-UHC and the Japanese healthcare system based.⁴⁰

Takemi Program's contribution to UHC

The Takemi Program in International Health (hereinafter Takemi Program) is an academic research program in international health that was established at the Harvard School of Public Health in July 1983.⁴¹ Takemi Program participants are called Takemi Fellows; there were 251 fellows from 53 countries in the program between 1984 and 2014.

Professor Michael Reich, who has been in charge of the Takemi Program, was listed as one of the authors of the special issue of *the Lancet* on Japan.¹⁰ He has greatly contributed to the promotion of UHC in Japan. His recent efforts include serving as a moderator during a panel discussion session at the ministerial conference of the aforementioned Global Conference on Universal Health Coverage.

International activities in disaster relief

JMA began investigating a framework of a new disaster relief program called the *iJMAT*, which stands for international Japan Medical Association teams. The *iJMAT* was developed under the expectation that Japan will have to accept rescue relief from overseas if and when a disaster of unprecedented scale hits the Tokyo metropolitan area (e.g., an epicentral earthquake) or the southeast and/or southern coastline of mainland Japan (e.g., a Nankai Trough earthquake). At present, the *iJMAT* mainly assumes that Japan will accept medical teams from overseas at present, but in the future, it is envisioned that the *iJMAT* will also serve as a framework for sending medical teams from Japan to work overseas in response to medical emergencies such as Ebola hemorrhagic fever.

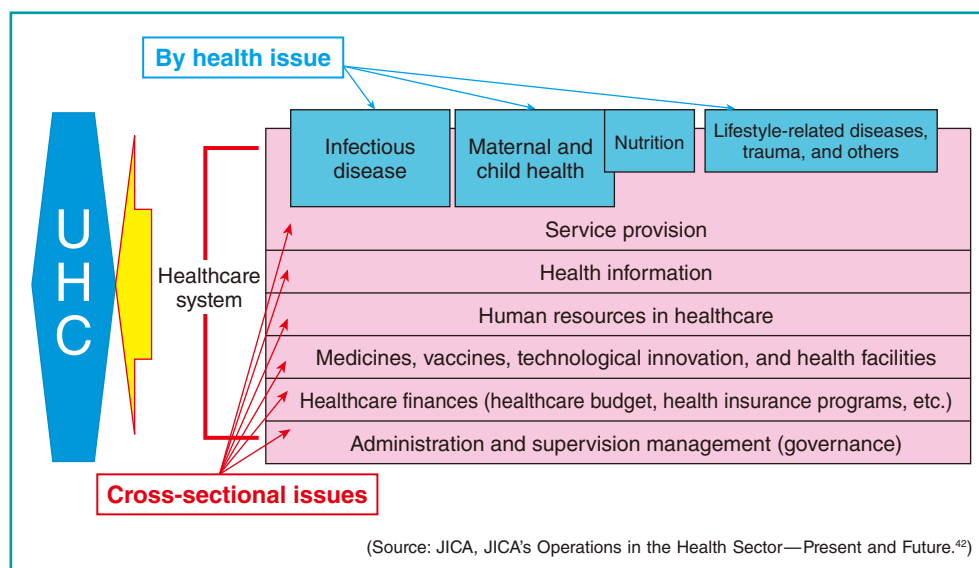


Fig. 6 Conceptual diagram of efforts in the health sector undertaken by the Japan International Cooperation Agency (JICA)

International Healthcare in Japan and the Development of the International Healthcare Industry

In industrial policy, it is common to discuss both international healthcare and the development of the international healthcare industry together. In the following sections, however, the perspective of international healthcare and the perspective of the development of the international healthcare industry are taken as two separate perspectives in the consideration of Japanese global health strategies.

International healthcare

Series of strategies implemented by JICA for achieving UHC

In various developing countries, the Japan International Cooperation Agency (JICA) has been carrying out infrastructure development and many international healthcare projects in the health sector including in regard to maternal and child health, infectious diseases, and HIV (Fig. 6).⁴²

Based on many years of experience, JICA operates on the understanding that implementing international healthcare requires “accurate health information, a quality health workforce

and facilities to provide services, administrative structures for the provision of medical products and vaccinations, and sound governance for formulating and implementing such plans and budgets.” On this basis, JICA has supported developing countries in achieving UHC.

Diplomatic Strategy for International Health proposed at the Economic Cooperation Infrastructure Strategy Conference

In May 2013, the 4th Economic Cooperation Infrastructure Strategy Conference was held to discuss important issues relating to Japan and international economic cooperation. At the meeting, Minister of Foreign Affairs Kishida proposed the Diplomatic Strategy for International Health.

His proposal called for strengthening strategic collaboration with international organizations, strengthening domestic systems and human resources, and continuing to provide support in Africa toward achieving MDGs. UHC, the third item on the Post-2015 Development Agenda, is listed as an important challenge.

Activities by the MHLW and non-profit organizations

The Ministry of Health, Labour and Welfare (MHLW) has engaged in efforts in international healthcare over the years. As an example, Japan

has hosted the ASEAN and Japan High Level Officials Meeting on Caring Societies since 2003. This large-scale conference is held to facilitate the exchange of information regarding social security and healthcare systems among ASEAN countries that can subsequently be put into practice. Japan has been executing a project to share information with ASEAN countries: the Japanese government has accepted trainees from ASEAN countries that aim to achieve UHC, such as Myanmar.

Professional, non-governmental, and non-profit organizations in Japan have engaged in many projects in international healthcare. Research institutes and universities as well as independent physicians and researchers have engaged in research projects in various ways.

To give a few examples of Japan's efforts in the field of international health in ASEAN countries, Japan has promoted the Maternal and Child Health Handbook (e.g., in Indonesia), school health systems (e.g., in Myanmar), and UHC through strengthening social security systems (e.g., in Indonesia).

International development of the healthcare industry

Establishment of Medical Excellence Japan

Medical Excellence Japan (MEJ) is an incorporated general association created by the government and the private sector.⁴³ It was established in 2011 to coordinate international business development. The purpose of MEJ is to promote inbound business (facilitating the treatment of overseas patients in Japan) and outbound business (facilitating the export of Japanese healthcare services and equipment as a package overseas).

Headquarters for Healthcare Policy and Task Force for the International Development of Healthcare

The Task Force for the International Development of Healthcare, which was established within the Cabinet's Headquarters for Healthcare Policy, aims to promote efforts in regard to the international business development of medical technology and services by facilitating collaboration among relevant ministries and agencies. The relevant ministries and agencies include the Ministry of Foreign Affairs (MOFA), MHLW, Ministry of Economy, Trade and Industry (METI), and Ministry of Education, Culture, Sports, Science and Technology. These ministries

and agencies initiated a discussion with relevant organizations (JICA, MEJ, etc.) in regard to the overseas health sector in August 2013.

Furthermore, an ad-hoc working group on the ASEAN Health Initiative was established in July 2014.

Industrial Competitiveness Council (Headquarters for Japan's Economic Revitalization)

In June 2014, the government's Industrial Competitiveness Council named the promotion of inbound and outbound business in healthcare and long-term care as one of the important items in the Japan Revitalization Strategy (Revised 2014).⁴⁴ The Council also presented a course of action in which the prime minister would actively promote healthcare as an industry; this course of action has already been approved by the Cabinet.

METI's projects in international business development

METI has developed business models to realize the Japan Revitalization Strategy and strengthen its collaboration with the private sector, universities, and academic societies. As a specific attempt to promote international business development in the healthcare sector, METI has initiated a project to promote globalization in regard to both inbound and outbound business pertaining to medical/health equipment and services.

—Inbound business

Inbound business was not debated fully in the past. There are many issues to consider, such as the preparedness of medical institutions receiving foreign patients and the medical fee schedule for such patients. Sensitive issues that require caution come with accepting patients from abroad, such as the potential risk of infectious disease. Therefore, relevant cases in other countries must be studied and a careful approach must be taken. Some issues need to be resolved promptly through further discussion, such as how to balance care for foreign patients with care for patients covered by the Japanese healthcare system (i.e., Japanese citizens and foreign residents).

—Outbound business

A total of 21 outbound business projects were implemented in FY2014. An additional 13 projects were conducted either with the supplementary budget or by the MEJ. Many of these projects were executed by private business consortia constituted of manufacturers and medical

institutions; these projects either involved the construction of hospitals or medical centers in the target nation or the sale and maintenance of advanced medical equipment.

This approach shows some improvement over the traditional approach of wholesale exporting a hospital, but it also raises a few concerns. For example, projects have tended to focus on a particular social class in the target nation; furthermore, sustainability is never guaranteed. It is advised that involved parties in Japan take action from the shared viewpoint of supporting the future development of UHC in the target nation. Another recommendation would be to involve medical associations in the target nation in a project to achieve stable long-term operations.

MOFA and Memorandum of Cooperation

The MOFA has supported international business development by providing training programs and loaning medical equipment and through grants and public-private partnership projects (PPPs). Recently, the MOFA reached agreements with 12 countries, including 4 ASEAN countries (Cambodia, Laos, Myanmar, and Vietnam) to sign a Memorandum of Cooperation in regard to the healthcare sector.

Establishing the AEC

The ASEAN Economic Community (AEC) is expected to be launched at the end of 2015. It aims to build political stability and facilitate economic development in the ASEAN region, which has a total population exceeding 600 million. The AEC is expected to ease the movement of people, goods, and services across borders, eliminate tariffs, lift bans on the entry of skilled workers, and relax regulations on investment. The AEC will have a substantial effect on the healthcare sector as well.

Suggestions and Problems for Japan's Global Health Strategies

(1) UHC development should be promoted in coordination with the United Nations,

World Bank, and Asian Development Bank.

It is likely that the Post-2015 Sustainable Development Agenda, which will succeed the UN MDGs, will be based on UN Secretary-General Ban Ki-moon's general report for sustainable development entitled "The Road to Dignity by 2030." Goal 3 of the general report is, "Ensure

healthy lives and promote well-being for all at all ages"; in this regard, UHC will play a major role.

World Bank President Jim Yong Kim named Japan as a leading global model for UHC. Moreover, Prime Minister Abe wrote that "I will first and foremost spare no efforts to incorporate UHC as a crucial element of the Post-2015 Development Agenda" in a paper he contributed to *the Lancet*.

As shown here, the UN, World Bank, and Japanese government consider UHC one of the main themes in global health. It is therefore important to make preparations to include the promotion of UHC in Japan's global health strategy while taking into consideration cooperation with UN, the World Bank, and the Asian Development Bank.

(2) Ensuring the sustainability of the JP-UHC system should be considered a national policy.

As stated earlier, Prime Minister Abe discussed the active promotion of UHC in his global health strategy. Minister of Finance Aso stated that Japan should actively share its experience with the international community and contribute to tackling the challenges that we have in common by drawing on the experiences of the JP-UHC.

UHC is now being promoted as the future core of global health. However, with regard to the JP-UHC system, an editorial in *the Lancet* pointed out that "Combined with rising healthcare costs and an ageing population, Japanese doctors—like those elsewhere—worry about the sustainability of the JP-UHC under such pressures."¹⁰

Thus, the Japanese government must make efforts to ensure the sustainability of the JP-UHC system. The government should recall that, as a joint research program between Japan and the World Bank indicated, national effort as well as competition between political parties led to universal coverage in Japan. The government must confront the issue of ensuring the sustainability of the JP-UHC system as a national policy.

(3) Trade agreements such as the Trans-Pacific Partnership should not disrupt or interfere with achieving UHC.

The 200th WMA Council in April 2015 adopted the WMA Council Resolution on Trade Agreements and Public Health.¹⁹ Its first recommendation is to "advocate for trade agreements that protect, promote and prioritize public health

over commercial interests and ensure wide exclusions to secure services in the public interest, especially those impacting on individual and public health,” calling for nations to guarantee wide exclusions. Its second recommendation is to “Ensure trade agreements do not interfere with governments’ ability to regulate health and health care, or to guarantee a right to health for all.”

Therefore, government action to protect and promote health should not be sued through an investor-state dispute settlement (ISDS) or similar mechanism. Trade agreements such as the TPP should not interfere with the effort to achieve UHC in each country and should not interfere with the unique form of UHC each country may develop.

(4) Japan should disseminate information overseas regarding the course of events that led to the establishment of the JP-UHC system and make efforts to develop international human resources to participate in UHC policymaking.

In developing countries, how Japan overcame the difficulties it faced in the establishment of the JP-UHC system has drawn attention.

According to the analysis of “Lessons from Japan,” a joint research program of Japan and the World Bank, national efforts as well as competition between political parties led to universal coverage in Japan. In fact, political leadership directly played a role in realizing a standardized medical fee schedule across the nation. The joint research program also indicated this negotiation process can serve as an effective model for other countries. In the course of establishing universal coverage in Japan, an organization of physicians with professional autonomy stood at the front lines, on the basis of their profession, to fight for a better healthcare system against the bureaucratic leadership.

Other countries should be able to access information related to this fact and many others pertaining to the establishment of the JP-UHC system. It is also important that the national medical associations in all of the CMAAO countries actively propose UHC systems to their national governments.

To this end, it is essential to educate and train people to ensure that there are international human resources capable of supporting UHC policymaking in collaboration with the World Bank, the Asian Development Bank, etc.

(5) The development of separate healthcare programs and UHC preparation should be promoted by streamlining and centralizing maternity care, school health, infectious disease management such as for tuberculosis, and emergency care such as for traffic accidents.

In addition to its insurance system, Japan has unique health policies including in regard to maternal and child health management, school health management, infection control (for diseases such as tuberculosis), and emergency medicine for traffic accidents.

Considering that current health statistics in ASEAN countries are roughly equivalent to figures from 1940 to 1965 in Japan, Japan’s past experience, including as described above, can greatly help these countries. Japan is likely to further contribute to ASEAN countries in these 4 main healthcare areas.

For this reason, these 4 areas should be made the center of Japan’s efforts for facilitating UHC by streamlining and centralizing services in target nations and developing individualized healthcare programs according to the circumstances of each target nation.

(6) Japan should disseminate information overseas about *kakaritsuke* physicians and engage in international human resources development.

According to the Organisation for Economic Co-operation and Development (OECD), physicians in charge of primary care must be generalists (i.e., their area of practice must be general medicine as construed in the British and other healthcare systems; such physicians, for example, family physicians, have no specific area of expertise). *Kakaritsuke* physicians in Japan who practice medicine at private clinics do not meet this definition because they are trained in general clinical medicine as well as in specific areas of medicine, with comprehensive capabilities entrusted with community medicine, health and welfare.

The primary care system in Japan, in which clinical physicians serve as *kakaritsuke* physicians, has produced excellent outcomes. Therefore, negotiations with the OECD should take place and an international awareness campaign about the primary care system in Japan should be conducted.

The healthcare system in Japan is greatly

dependent on the primary care provided at clinics; this practice should be made known internationally. Education and training to develop medical human resources from an international point of view are necessary to deepen knowledge regarding activities related to primary care provision and medical practice.

(7) Global health should be developed in concert with a consideration of the management of global environment problems.

In response to the 5th Assessment (General) Report of the Intergovernmental Panel on Climate Change (IPCC),⁴⁵ UN Secretary-General Ban stated that the General Report on the Post-2015 Sustainable Development Agenda would serve as a guideline for negotiations toward establishing a global agenda that places humanity and the earth at the core and is supported by human rights. Many of Ban's goals employ the word "sustainability" to support SDGs.

The future development of global health should take the ideas of the Post-2015 Sustainable Development Agenda into consideration and address the environmental issues of the planet in an integrated fashion.

(8) Support systems, such as for managing large-scale international disasters and preventing the spread of infectious diseases, should be developed and maintained.

Changes in climate will likely produce frequent high tides and hurricanes of unprecedented scale, causing damage in regions of the planet such as the ASEAN countries, where the sea-water temperature has been rising significantly.

In addition, in the future, the number of nuclear reactors in the world is expected to double, heightening the potential risk of nuclear accidents more than ever. Healthcare systems will be tasked with handling the negative influence on humans of radioactive materials dispersed during accidents and with treating the effects of radiation.

Furthermore, global health must respond to the threat of epidemics, as the example of Ebola hemorrhagic fever has recently shown. Infectious diseases with high mortality rates can rapidly spread through towns in developing countries, posing difficulties that mankind has never faced before.

In light of the above, Japan needs to prepare global and large-scale disaster management regimes and develop support systems to prevent

highly mortal infectious diseases from spreading. To aid these objectives, it is crucial that the *i*JMAT program, an international version of the JMAT (Japan Medical Association Team) program that currently operates under the assumption that Japan will accept relief from overseas, be expanded to encompass both the receiving and sending of relief teams internationally.

(9) International healthcare policy, which the Japanese government is trying to promote in accordance with international trends, and international development of Japanese healthcare industry should be reconsidered.

Suggestions as to international healthcare policy of Japan

1. Collaboration should be facilitated and reinforced among separate programs, including those related to maternal and child health. Overseas UHC support should be strengthened through cooperation with local healthcare stakeholders; human resource development should be a focus.
2. Japan has insufficient human resources to promote international healthcare. Thus, efforts should be made in regard to human resource development—for example, an international healthcare training course should be provided.
3. Information regarding JICA activities should be widely disseminated through the use of easily understandable materials in order to improve both domestic and international recognition.
4. In addition, it is urgent that human resources development is undertaken in Japan to ensure that there are sufficient personnel capable of dealing with emerging and reemerging infectious diseases.

Suggestions as to the international expansion of the Japanese healthcare industry

1. Profit-oriented outbound business targeting a specific social class excludes the poor and may interfere with the improvement of local healthcare.
2. Any outbound business should be required to be based on a long-term vision and to benefit UHC in the target nation. The possibility of collaborating with medical associations within target nations should also be investigated.
3. For inbound business, it is urgent that operational principles and rules are considered among the relevant authorities and healthcare organizations and institutions.

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Looking Back on My 44 Years with Japan: Connecting with Medicine, Public Health, and International Health^{*1}

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Michael R. REICH¹

I first came to Japan in July of 1971, almost precisely 44 years ago to this very day. Since then, my relationship with Japan has continued unbroken; indeed, as the years have passed the relationship has widened and deepened. Now when I arrive in Tokyo, I feel deeply that I am returning to my own country.

Over these 44 years, I have worked in the fields of medicine, public health, and international health in Japan, and have come to know many people and institutions. I would like to express my appreciation to all of them for their assistance, especially to the Japan Medical Association, for the support and encouragement I have received over the decades.

The event today provides me with an unusual opportunity to reflect on the path I have followed with Japan. This is not my usual kind of presentation; and I would imagine it is not the usual kind of presentation heard in this auditorium inside the Japan Medical Association. It is a personal story, not an academic analysis. I am going to try to present 44 years in 45 minutes. As my son Gabriel noted, that gives me one minute per year, with one minute at the end for conclusions.

It is not easy to explain one's own life. How do you analyze it? How do you evaluate it? In some ways, this lecture is a kind of "life review," an opportunity to reflect on a large portion of my experiences—those related to Japan. I have organized the story around people, places, and books. This is my effort to answer the question:



“Michael, what have you been doing in Japan? And what does it all mean?”

First of all, why did I come to Japan in 1971? Everyone asks me this question; and I have responded in various ways over the years. Here is the current version. I entered Yale University in 1968, and spent three years there studying molecular biophysics and biochemistry. My plan was to enter medical school, but I decided that first it was important to learn for myself about the world beyond the United States. The late 1960s were a time of turmoil and protest in America, especially on college campuses. That turmoil affected me, and I became dissatisfied with what I called “institutional education.”

At the time, Yale had a special program, called the 5-Year BA Program, to which I applied and was accepted. The idea was to leave Yale for a year, work in a non-Western country, and return to finish your undergraduate studies with expanded horizons and a broader worldview. I found placements in Peru, Tunisia, and Japan, all related to medicine and health. Ultimately I decided on Japan, in part because I had taken a

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¹ Director of the Takemi Program, Taro Takemi Professor of International Health Policy, Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston, MA, USA (reich@hsph.harvard.edu).



Fig. 1 The author in 1971

college course on Japan, in part because I had worked with a Japanese physician at Boston Children's Hospital during the summer, and in part because my father had visited Japan for work. Looking back, I can see how that simple decision shaped my life in striking ways, but at the time, I was clueless how radically it would transform me.

I was just 21 years old when I arrived in Japan (Fig. 1). I had no idea that I would stay in Japan for three years, instead of one that time. And I had no idea that I would continue visiting Japan every year, multiple times, for the next four decades of my life.

My first workplace was the Heart Institute of Japan, at the Tokyo Women's Medical University, directed by the famous cardiologist Dr. Shigeru Sakakibara. I began working as a technician in the cardio-catheterization room, running the oscilloscope. This was similar to work I had done at Children's Hospital in Boston—but in a very different context. After several months of working in the hospital, however, I decided that I was really more interested in broader social problems related to health: Japan's environmental disasters. With an introduction from Dr. Hiroshi Kasanuki, then a young cardiologist at the Heart Institute, I obtained a meeting with Dr. Taro Takemi, President of the Japan Medical Association.

In thinking back on that meeting, I marvel that Dr. Takemi, then the most powerful force in Japan's medical world, would agree to see a young long-haired American college kid. But not

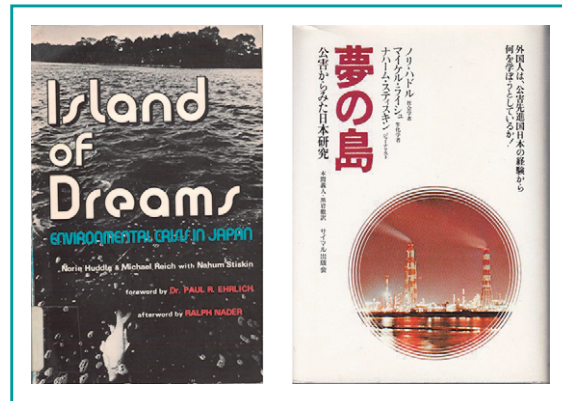


Fig. 2 *Island of Dreams: Environmental Crisis in Japan*

only did he talk with me in his huge office, he also introduced me to Dr. Toshio Toyama, the professor of public health at Keio University (a leading private university in Tokyo) and an expert on air pollution. With Dr. Takemi's blessing, Dr. Toyama provided me with a place to work and sponsorship, and I moved from the Heart Institute to the public health department at Keio Medical School. I worked in the Keio medical library, assisting with translations and editing, while pursuing independent research on Japan's pollution problems, working with Norie Huddle, another American then in Japan.

Three years later, I completed my first book, coauthored with Norie, called *Island of Dreams: Environmental Crisis in Japan* (Fig. 2). This was the first comprehensive book in English on Japan's pollution problems—it started with an historical perspective on the Ashio copper mine pollution in the late 1800s and examined all the major pollution cases of the postwar period. The book was also translated and published in Japanese. We chose the title of “Island of Dreams” as a metaphor, to express the costly underside of Japan's dreams of economic growth. We also decided on this title because it was the name of the garbage dump in Tokyo Bay; perhaps as a result, people thought the book was all about garbage, and it barely sold in Japan.

Remarkably, my advisor at Yale, Professor Harold Morowitz, agreed to accept this book as my undergraduate thesis. So I graduated from college in 1974, after spending three years in classes at Yale and three years researching and



Fig. 3 *Six Lives/Six Deaths: Portraits from Modern Japan*

writing in Japan, with a B.A. in molecular biophysics and biochemistry. I had reached the number of required credits for the degree, through some magical events; and he decided to let me graduate without going back to classes. Morowitz looked at me and my thesis philosophically; he said the purpose of getting a B.A. was to go out and do good things in society; in his view, the book manuscript showed that I was already doing that. Looking back now, it seems incredible that Yale let me do this; but it reflects the institutional flexibility that then existed at Yale, something I still appreciate.

While I was in Japan, I became friends with Dr. Shuichi Kato, a former medical doctor and one of Japan's most prominent cultural historians and commentators in the postwar period. When in the fall of 1974 I returned to Yale as a graduate student, Kato was also arriving as a visiting professor. I worked with him to design and teach a course on Japan society as seen through film; we then collaborated on a second course, with Professor Robert Jay Lifton, a psychiatrist at Yale, about attitudes toward death in Japan. We selected a series of prominent Japanese people from over the past one hundred years, and began each analysis with a writing by that person about the meaning of death for them. My role was initially as teaching assistant and research assistant, but that evolved over time. When the three of us decided to write a book based on the course, I became the person negotiating between the two senior men (both thirty years older than I), between the Japanese and American perspectives, to assure effective collaboration between

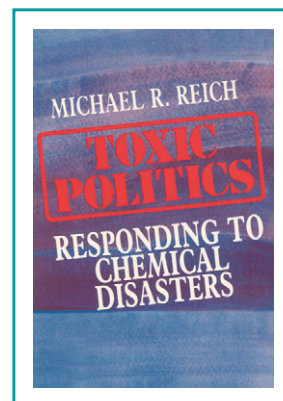


Fig. 4 *Toxic Politics: Responding to Chemical Disasters*

the two worlds. (In many ways, I have continued in that negotiating role between the two worlds of Japan and the USA.) That collaboration became my second book, with the English title, *Six Lives/Six Deaths: Portraits from Modern Japan*, published by Yale University Press in 1979 (Fig. 3). The book appeared first in Japanese. With Kato as the first author and published by Iwanami (a prominent editorial house), it sold well in Japan; some selections from the book were even used in university entrance exams.

In the mid-1970s, I entered the doctoral program in political science at Yale, having already published two books. I decided to continue my work on the politics of pollution, but to extend the analysis to comparative politics: for my dissertation I decided to look at one chemical disaster in Japan, one in the United States, and



Fig. 5 Takemi Fellows, 1984-2015; Groups 1-31

one in Italy. Too many people only compared Japan and the US, while Japan, I thought, shared a number of political characteristics with Italy. I returned to Japan to do research in the late 1970s, and was affiliated with the National Institute of Public Health of Japan, in its majestic old building in Shiroganedai in Tokyo, built in the prewar period with funding from the Rockefeller Foundation.

The three-part comparative study (which was submitted as my doctoral thesis in 1981) became my third book, *Toxic Politics: Responding to Chemical Disasters*, published by Cornell University Press (Fig. 4).

In the early 1980s, I began to help organize the Takemi Program in International Health at the Harvard School of Public Health. This program started when Dr. Taro Takemi invited the Dean of the Harvard School of Public Health, Dr. Howard Hiatt, to visit Japan. Out of their discussions and common concerns emerged the

idea of creating a mid-career fellowship program at Harvard to improve the allocation of resources for health, especially in the world's poorest countries. Dr. Takemi agreed to raise the funds to establish the program and Dr. Hiatt agreed to support its establishment at Harvard. I serendipitously met Dr. Hiatt (at a Harvard cocktail party), and I agreed to help write the first proposals for the program and suggest how it would be structured. In July 1983, I began to implement the Takemi Program, under the direction of Professor David Bell, when I became a faculty member at the Harvard School of Public Health.

The first group of Takemi Fellows arrived at Harvard in the fall of 1984, with one person each from Japan, China, India, South Korea, and Indonesia. Since then, the Takemi Program has continuously grown into a unique mid-career fellowship program in global health; over more than 30 years, 260 fellows from 53 countries have participated (Fig. 5). The Takemi Program is the



Fig. 6 Takemi Symposia on International Health, held in 1984, 1986, 1988, 1990, and 2013

longest continuing fellowship program at the School of Public Health at Harvard, and is a unique collaboration between Japan and the United States to advance health in low- and middle-countries. There is nothing else like it in the world.

In its first decade, the Takemi Program held an international symposium every two years on critical topics in international health. Each symposium resulted in a book, made up of papers submitted by global experts on health policy and by Takemi Fellows, using multidisciplinary research approaches, exactly as Dr. Takemi supported. **Figure 6** shows the covers of books from the symposia; the most recent one was held in October 2013, to celebrate the 30th Anniversary of the Takemi Program. These international meetings have addressed themes high on the global policy agenda, including: how to improve resource allocation for health (1984); the impacts of economic crises on health and nutrition in the 1980s (1986); international cooperation for health (1988); protecting workers' health in developing countries (1990); and the challenges of governing health systems at the community, national and global levels (2013).

About 1990, I began working with colleagues at Harvard, especially Professors Marc Roberts



Fig. 7 *Getting Health Reform Right: A Guide to Improving Performance and Equity*

and William Hsiao, on how to improve the performance of health systems. We combined our disciplinary expertise—on economics, politics, and ethics—to create a comprehensive approach to health system analysis, called the Flagship Framework on Health Systems. We wrote a landmark textbook called *Getting Health Reform Right: A Guide to Improving Performance and Equity*, published in 2004. This was translated into Japanese in 2010 (**Fig. 7**). The translation



Fig. 8 *Access: How Do Good Health Technologies Get to Poor People in Poor Countries?*

team included a number of former students and Takemi Fellows in Japan.

We have taught this approach to everyone from Ministers of Health to World Bank officials to Masters students at Harvard. The Flagship Course, based on the book, has been taught at the World Bank for nearly 20 years, with over 20,000 participants from countries all around the world. In December 2013, we taught the course in Tokyo, with the collaboration of the government of Japan, to a group of around 80 participants from many nations.

Another major theme in my research is access to health technologies. In 2008, I published a book with a former doctoral student, Dr. Laura Frost, entitled *Access: When Do Good Health Technologies Get to Poor People in Poor Countries?* The Japanese translation is being published in 2015, with the lead translator a former Takemi Fellow, Dr. Kiichiro Tsutani (Fig. 8). This book, which was written with support from the Bill & Melinda Gates Foundation, has been used as a textbook in public health courses around the world. The book's ideas have also been used to design the access strategies for various organizations, including the Japanese pharmaceutical company Eisai Co. The full book is available for free on the internet (at www.accessbook.org). How could I write a book about access and not provide access to it?

In 2007, I began an ongoing series of projects that were about Japan, with Japan, and for Japan, all of them in collaboration with my good friend,

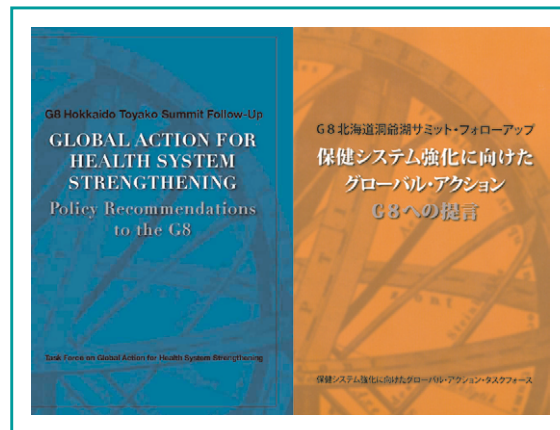


Fig. 9 *Global Action for Health System Strengthening: Policy Recommendations to the G8*

and Dr. Taro Takemi's son, Professor Keizo Takemi. I had worked with Keizo Takemi from 1983 onwards to create the partnerships in Japan that would assure the continuity of the Takemi Program at Harvard. These partnerships, especially with the Japan Medical Association, have been essential to the activities of the Takemi Program. In 2007, after Keizo lost his campaign for re-election to the Upper House, I invited him to come to Harvard as a visiting researcher—as a Takemi Fellow—and our collaboration gained new depth, purpose and value.

We started with three projects that led to major publications in the *Lancet*. Our first project was to assist the government of Japan in preparing a global health proposal for the G8 Toyako Summit in 2008. We focused on the theme of health system strengthening and wrote two papers that were published in the *Lancet*. The project also published a technical report through the Japan Center for International Exchange, and a policy paper submitted to the government in English and Japanese (Fig. 9). This effort influenced global health policy, giving a strong impetus to the theme of health system strengthening, with particular attention to the roles of information, financing, and human resources for health. Three research teams on these topics were directed by Kenji Shibuya, Ravi Rannan-Eliya (from Sri Lanka), and Masamine Jimba. With this report for the G8 Summit, Keizo Takemi became recognized as a global leader on health systems and health policy.

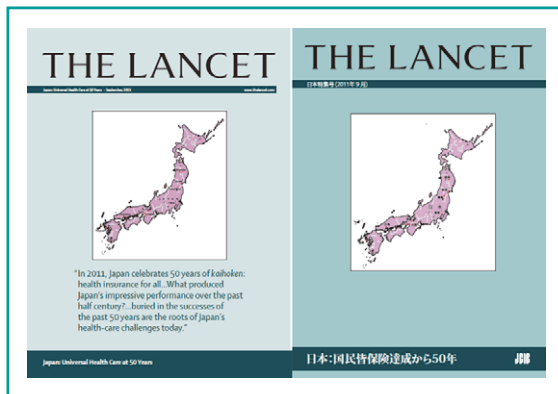


Fig. 10 *Lancet* Special Issue on Japan: Universal Health Care at 50 Years

Our second project focused on Japan's health system, celebrating 50 years of universal health coverage through Japan's *Kokumin Kaihoken Seido* (Fig. 10), thanks to Japan's achievement of health insurance for all in 1961. A special issue on Japan (in both English and Japanese) was the *Lancet's* first dedicated to a high-income country (previous special issues had focused on Mexico, China, southeast Asia, India, and South Africa). The articles in the special issue covered key topics related to Japan's health system—history, health achievements, costs, quality, aging, and global health—and quickly became a landmark publication representing the best research on Japan's health system. The special issue highlighted, for an international audience, Japan's health experiences and policies, and helped explain why and how Japan achieved its impressive health achievements. The three research leaders for this publication were Keizo Takemi, Kenji Shibuya, and Naoki Ikegami (from Keio University). This was not my first encounter with any of these three remarkable individuals. Indeed, I first met Ikegami when he was a medical student at Keio in the early 1970s and I was affiliated with the public health department there; I have known Shibuya from the time he took my classes at Harvard in the 1990s; and of course, I had collaborated with Takemi since 1983.

Our third project built on the *Lancet* special issue to place Japan's achievements of universal health coverage in a comparative analytic per-



Fig. 11 *Universal Health Coverage for Inclusive and Sustainable Development: A Synthesis of 11 Country Case Studies*

spective. The project, headed by Keizo Takemi, created a partnership between Japan and the World Bank, with research teams in 11 countries at different levels of development, to examine the political economy of moving towards universal health coverage, with a focus on health financing and human resources for health. The Japanese research team was directed by Professor Ikegami, and the World Bank project was led by Akiko Maeda. This project produced a summary report in English and Japanese (Fig. 11), a final paper published in the *Lancet*, and multiple research papers on each country in the endeavor: Bangladesh, Brazil, Ethiopia, France, Ghana, Indonesia, Japan, Peru, Thailand, Turkey, and Vietnam. This study emphasized that although moving towards universal health coverage is a complex social and political process, with many challenges, it can be achieved. It requires a long-term policy engagement that combines technical knowledge and political know-how, as the continuing efforts to improve the health system of Japan demonstrate.

My next collaboration with Keizo Takemi was the 30th anniversary celebration of the Takemi Program in International Health, held at Harvard and at the Japan Medical Association in the fall of 2013. We had the pleasure of welcoming nearly 80 Takemi Fellows back to Harvard, an impressive tribute to the program. The symposium focused on the theme of governing health systems at the community, national, and global levels—a top priority question on the



Fig. 12 Keizo Takemi and the Author at the 30 Anniversary Symposium of the Takemi Program in International Health at Harvard, October 2013



Fig. 13 Boston Consul General of Japan Tsutomu Himeno, the Author, and President Yoshitake Yokokura of the Japan Medical Association

current global health agenda. The symposium included research papers by past Takemi Fellows from around the world, and commentaries from global experts at Harvard and other institutions. The symposium was cosponsored by the Japan Medical Association and the Japan Pharmaceutical Manufacturers Association with additional support from several other organizations. At the meeting, we recognized the contributions of a few key individuals as Honorary Takemi Fellows, including Dr. Masami Ishii, Executive Board Member of the JMA, who has consistently supported the Takemi Program for many years. In 2015, we published the symposium book based on the presented papers, co-edited with Keizo Takemi (Fig. 12). For me, the experience of celebrating three decades of supporting researchers in the Takemi Program at Harvard was emotionally fulfilling—and totally exhausting at the same time.

At the end of April 2015, I was honored by Japanese government with the Order of the Rising Sun, Gold Rays with Neck Ribbon, for my continuing efforts to support public health in Japan and Japan's contributions to global health. In early June in Boston, on a beautiful summer day at the official residence of the Japanese Consul General, I received the official medal from Consul General Tsutomu Himeno. I was particularly gratified by the attendance of President Yoshitake Yokokura of the Japan Medical Association, his wife, and several members of the JMA Executive Board. **Figure 13**



Fig. 14 “Non Senza Fatica”; inscription over doorway in Ascoli Piceno, Italy (photo: R. Gnesotto)

shows me with President Yokokura and Consul General Himeno. I am pleased that many others could also attend that special event, including colleagues from Harvard, Takemi Fellows, friends, and family members.

When I received this award from the government of Japan, one past Takemi Fellow, Roberto Gnesotto from Italy, sent me a picture of a building in the town of Ascoli Piceno, with three words printed over the door's arch, “*Non Senza Fatica*” (Fig. 14). This phrase is attributed to Xenophon, the Greek historian and a student of

Socrates. The meaning, simply put, is that without effort there are no achievements. Of course, not all efforts result in positive achievements, But some do. The phrase reminded me that I have made many efforts in my 44 years of relating with Japan, and some have had positive results. I have tried, over these many years, to create something of value by concentrating on contributing in the field of public health in Japan, and linking Japan with the rest of the world in many ways.

This reflection leads to my conclusion. The path I have followed over these 44 years is not a typical one, in either America or Japan. My experiences with Japan remind me of a concept from policy studies, called “path dependency.” The idea is that when confronted with a choice in policies, the chosen selection produces a cascade of continuing positive feedback loops, so that it becomes increasingly difficult to return to the original choice and select the other path. The same thing happens in individual lives. No one told me when I arrived in 1971 that I would

live in Japan for three years and then continue coming back to Japan every year multiple times for the next four decades. Even as you start down a path, it is hard to predict where it will take you. I never imagined when I first came to Japan how this country would become such a large part of my life. But it does seem to me that following one path intensely and deeply led me to contribute to humanity, both in one country and in the world. At the end of the day, even while still walking on the path, that effort seems worthwhile.

Acknowledgments

It is a great honor for me to receive the award of the Order of the Rising Sun, Gold Rays with Neck Ribbon, from the government of Japan. I appreciate this honor and express my personal gratitude to the Japan Medical Association for hosting the event to celebrate the award in Tokyo and for the many years of partnership with the Takemi Program at Harvard University. This partnership has been essential to the continuity of the Takemi Program.

Participation in Relief Activities in the Aftermath of the Great Nepal Earthquake and Disaster Reconstruction Assistance

JMAJ 58(3): 111-113, 2015

Taro YAMAMOTO¹

At 11:56 a.m. (Nepal Standard Time) on Thursday April 25, 2015, an earthquake of magnitude 7.8 struck Nepal approximately 77 km northwest of Kathmandu. There is a time difference of 3 hours and 15 minutes between Nepal and Japan, and so the earthquake occurred at 15:11 on the same day Japan Standard Time. The earthquake killed more than 8,000 people and caused an economic loss of approximately 5 billion US dollars (625 billion yen).^{*1} Nepal's Gross Domestic Product for 2014 was 19.4 billion US dollars (2.4 trillion yen), meaning that the economic damage caused by the earthquake equaled one quarter of the country's GDP. According to a friend in Bangladesh, large earthquake tremors were felt in Bangladesh's capital Dhaka, which is located a distance of approximately 1,000 km from Kathmandu.

Two days after the earthquake, on April 27, I got in contact with the Association of Medical Doctors of Asia (AMDA), an NGO that had begun earthquake disaster relief activities, and four days after the earthquake, on April 29, I departed for Nepal as a member of the AMDA. I have heard that AMDA received financial assistance from the Japan Medical Association (JMA).

Flying on a budget airline, we traveled to Kathmandu via Kuala Lumpur, the capital of Malaysia, arriving on April 30.

My first report to Japan from Nepal was as follows.

We arrived in Kathmandu yesterday (April 30). There are collapsed buildings here and there throughout the city, but it seems comparatively calm. Shops have also been reopening yesterday and the day before.

The supermarket we visited to purchase relief supplies is also functioning, except that there is a lack of fresh food products.

Today we are heading for the Sindhupalchowk District in the Bagmati Region first thing in the morning. It is located around four hours' drive north of Kathmandu. Several hours' walk from there are apparently numerous small villages scattered about, and our intention is to deliver relief supplies to places such as these. Due to the huge scale of the damage, the current situation is still unclear.

We will return to Kathmandu once again on May 4. Until then, it will probably be difficult to communicate by e-mail, but I will take a good look at the current situation as we are providing assistance (Yamamoto).

PS: There is a person here in Nepal that I will never forget, an American named Dr. Ron O'Connor. Around 50 years ago, he was apparently under the tutelage of a Japanese physician (Dr. Noboru Iwamura) in Nepal who inspired him to establish an international NGO called MSH (Management Science for Health). Now it is numerous Japanese volunteers seeking to contribute to international health who are under Ron's tutelage.

"Thanks Taro, we wish you the best and are

*1 Foreign exchange rate for June 6, 2015: 1 US\$ = 125 yen.

¹ Department of International Health, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan (y-taro@nagasaki-u.ac.jp).



As of April 30. On the way to Sindhupalchowk District in the Bagmati Region



May 1. The patient carried on the litters who have external injuries and doctors of AMDA Nepal who take care of him

grateful for your service (Ron)."

I always feel that in various different places there are people with various hopes and beliefs, and receiving these people's hopes provides a driving force for my activities. I am truly grateful.

The road to the disaster zone took twice as long to travel than usual due to the rubble caused by the earthquake as well as the many vehicles trying to pass along it. Even so, on the day we arrived in Sindhupalchowk District in the Bagmati Region electricity services had already been restored, and it was possible for us to operate x-ray equipment that had somehow survived the earthquake undamaged. This was extremely helpful in treating patients who were being examined mainly for symptoms such as bruises and broken bones. Members of AMDA-Nepal teams were already treating patients when we arrived in the disaster zone.

My next report to Japan was sent from Kathmandu on May 5.

The aftershocks continue. Every day, around 70 patients either walk or are carried on stretchers/litters to receive treatment. The majority of them have external injuries, including broken bones and cuts. They walk for four to five hours along mountain paths to come—amongst them are patients that have walked all day to visit the make-shift clinic. My ears still ring with the words of elderly people crying out that they have lost everything—their home destroyed, family members killed,

cattle and goats also crushed under bricks. Cattle and goats are the only assets of the people living in the mountains.

Yet beyond this place there are even deeper mountain ranges, and we have no idea of the situation in places that are several days' walk from here. According to government information from helicopters that were flown over the area, some villages have completely disappeared. And there are still many villages like this.

The relief assistance we provided may have been like a drop of water in a huge river, but my feeling was that all we could do was gather together as many droplets as possible. For the time being, anyway, I will be heading back to Japan today.

My activities in Nepal were the third time I have participated in earthquake disaster relief activities, after the Haiti earthquake and Great East Japan Earthquake, and there were several things that I noticed.

Firstly, as far as I know, assistance from China, India, and ASEAN countries was on an unprecedented scale. There were some 1,000 relief workers from China and India providing assistance, and more than 100 from Malaysia, Indonesia, Thailand, and other countries—there were probably several hundred relief workers from Malaysia. Bangladesh, Sri Lanka, and other countries also sent relief workers to provide assistance. What contributed to this massive movement of people was the existence of budget



A baby born in the make-shift clinic

airlines. This situation gave a premonition of changes to come in the landscape of international emergency assistance, which until now has been monopolized by developed countries. This means that the next time a massive earthquake occurs in Japan, enormous relief teams—including from countries such as these—will prepare to and enter Japan. It will be a different landscape from that of the Great East Japan Earthquake. Without preparation, there is concern that there will be an international eruption of criticism of the confusion and responses in the aftermath of the disaster.

Secondly, against this background, what kind of assistance will Japan provide in the future? This includes not only disaster emergency assistance but also assistance with regard to countermeasures to infectious diseases such as new strains of Influenza and Ebola. In such situations, the teams that Japan send to participate in relief

activities should be *iJMAT*, which the JMA is promoting. Agreements are concluded ahead of time with counterparts in various countries to carry out international disaster assistance activities reciprocally. While in some cases a country may provide assistance, at other times it may be the recipient. These are believed to be extremely important measures as the landscape of international assistance is transforming.

However, with regard to Japan's international relief assistance in the future, I believe that, as a developed country, there is much that Japan can do to broadly benefit countries that have been struck by disaster and the international community, such as providing "lines" of assistance that continue long after the acute rescue/relief phase, rather than just providing "picture-perfect" emergency support in the acute rescue/relief phase that is easy for the media and general public to understand. For example, networks created over long periods (e.g.: the network built-up over 30 years by AMDA or the school health project that the JMA has been implementing in Nepal for many years) could function in times such as these. That is something I have felt in each region I have been to for relief assistance activities.

The need for assistance is continuing as the stage shifts from humanitarian assistance in the acute rescue/relief phase to the reconstruction phase. We are currently (as of the time of writing) in the midst of applying to the Japan Science and Technology Agency (JST) for funding to create a plan and evaluation for joint reconstruction assistance between Japan and Nepal. As long as there are people who require assistance, we intend to continue providing it. This will no doubt become a huge challenge for me, personally, as well.

Report from the Junior Doctors Network on the WMA Council Session and JDN Meeting, Oslo 2015

JMAJ 58(3): 114-116, 2015

Shinu HAYASHI¹

Background

As a member of the Japan Medical Association Junior Doctors Network (JMA-JDN), I had the honor of participating in the World Medical Association (WMA) Council Session and JDN meeting held in Oslo, Norway, from April 16 through 18, 2015. I am grateful for the opportunity to report on these meetings. The WMA is an organization of 111 national medical associations (NMAs) representing physicians throughout the world. The JDN, an organization for physicians who have fewer than 10 years of career experience since graduating from medical school, was established as a subsidiary organization within the WMA in 2010. The establishment of the JDN in Japan followed in 2012, and the JMA-JDN was officially acknowledged by the JMA in 2013.

The vision of the JMA-JDN is as follows:

Our volunteer-driven network provides an internationally focused platform for Japanese junior doctors to develop broad activities in public health and health policy, to improve the health of our communities, and to encourage our members to foster relationships with the worldwide physician community.

Based on the vision above, the members participate in international conferences, hold seminars, and carry out research projects and student exchange programs that transcend the barrier of professional areas of expertise.^{1,2,3}

Council Session

Representatives of the member NMAs gathered at the WMA Oslo Council and discussed various themes related to medical ethics and social medicine, including smallpox virus stockpiles, sexual minorities, trade agreements, aging society, mobile health, and the professional framework for associating with social media for physicians. They seriously debated the ideal way of the future world for which we should aim and what physicians should do for a better future. Physicians with different cultural backgrounds and various values face many difficulties in creating one vision, but I felt the significance of such an effort. In fact, the Declaration of Helsinki, adopted by the WMA in 1964, serves as the most important ethical code for medical researchers even now.

JDN Meeting

The JDN can bring up subjects to the WMA Council and speak during the session. The JDN is involved with various subjects, but major ones that have a large influence on junior doctors, such as physicians' well-being, are discussed enthusiastically in particular. The JDN members have fewer fetters, and that is our strength as well, so we freely exchange ideas from the viewpoint of "how physicians should ideally be" on subjects that involve political aspects, such as nuclear weapons and smallpox virus stockpiles.

There were 2 especially hot topics at the meeting. One was the development of a database of training programs across nations. This

¹ You Home Clinic Heiwadai, Tokyo, Japan. Japan Medical Association Junior Doctors Network (shin-u.hayashi@you-homeclinic.or.jp).

topic was brought up because an increasing number of medical school graduates cross borders for their post-graduate programs. In fact, an electronic certificate system to prove what kind of programs one has completed and where is already being developed. Such a system will not only increase training opportunities but will ensure the quality of training programs as well. This important initiative is in progress mainly in Europe.

The second was the limit on working hours for physicians. It is known that a physician working for long hours has an increased risk of medical malpractice,⁴ but junior doctors are prone to work overtime when proper regulation is not in place. Situations vary among nations, but working-hour limits are relatively strict in the EU nations, whereas physicians in Asian and African nations tend to work long hours. Medical safety is not the only issue. The number of female physicians or physicians raising children is increasing, and these physicians have difficulties in working long hours. Thus, instituting a working-hour limit is considered a necessity for physicians in general to continue their job. In Japan, many hospitals do not consider the standby hours for on-calls or night duties as working hours. In the EU nations, however, both of those categories of hours are considered to be working hours, and the total amount of time worked per week is supposed to be 48 hours or less including overtime, according to the law. The EU nations are successfully reducing physicians' working hours year after year and have managed to reach a limit of fewer than 50 hours per week on average now. Reportedly, the EU nations are making further efforts to improve physicians' work environment to achieve a limit of 40 hours per week. I felt a substantial difference, since the working hours for a physician in residency can sometimes exceed 100 hours per week in Japan.

There is also a movement in Japan to improve working hours for physicians. The JMA established a project committee on health support for hospital-employed physicians to realize reasonable working hours. Many study results have been published, and the situation is gradually improving. However, there are still many more challenges. Setting a working-hour limit is a difficult problem to address, since different nations have different systems and healthcare resources.



From left: Dr. Kloiber (WMA Secretary General), Dr. Matsubara (JMA Vice-President), Dr. Hoven (Chairperson of WMA Council), Dr. Yokokura (JMA President), and the author

Nevertheless, it is a fact that condoning overtime labor will do no good in protecting the safety of either patients or physicians. The important thing here is to explore better approaches and options while considering the situations of each nation.

For both topics—developing a training-program database and setting a working-hour limit—junior doctors are playing the main role in preparing the frameworks. We should not just wait for the public institutions to prepare frameworks; it is very important to actively voice our own opinions with a sense of ownership for matters that deeply involve our generation.

JDN meetings offer the opportunity to talk about agenda topics on the table as well as a place to share and exchange information and ideas for junior doctors from various nations. Each nation reported domestic healthcare situations and the efforts of its JDN member. Representing JMA-JDN, I reported about our seminar planning on community medicine, international health, and professional career development; a social gathering of junior doctors from Japan and Korea; and our participation in the JMA Hospital-Employed Physicians Committee's sectional meeting for physicians in clinical practice. I also received questions regarding clinical experience in everyday practice, so I introduced home care services available in Japan.

Conclusion

At this JDN meeting, where physicians of the

same generation gathered from around the globe, participants including me were able to learn about each other's thoughts and work styles. Despite different cultural backgrounds, various issues were positively discussed with a desire for better medical practice and to support people's health. The wisdom I acquired during my clinical practice helped me greatly when debating what a physician should do for a better future beyond the boundaries of nations. I will continue to work in community medicine while being connected to the world. From another perspective, I will contribute to the world while working close to patients' lives. I was filled with

a great sense of satisfaction for my profession as I left Oslo.

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Managing a Narrow Escape from Death

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Tatsuo KUROYANAGI¹

Onset of Angina

Around 4 a.m. on July 10, 2014, I suddenly woke up, feeling pain in the upper left area of my chest. The pain soon subsided, but it was a kind of pain that I have never experienced before. Thinking it could be myocardial infarction, I looked it up in a medical dictionary and found that many of the symptoms described were consistent with my own. I slept until about 8 a.m. since there were no other abnormalities, and went to my office after a 1-hour commute via train as usual.

That night, I sent out a group e-mail titled “*Ka-cho-fu-getsu* [Beauties of Nature] News” to my close colleagues explaining about what happened earlier that morning. I went on, writing, “Today when I arrived at the JMA office, an announcement of the first Japan Medical Association (JMA) committee meeting in FY2014 was waiting for me. So I planned to consult experts there. It seems I too will be receiving the benefits of Bayaspirin, which my wife takes.”

Several friends who read this e-mail contacted me, advising me to go see this or that famous physician right away, to whom they would gladly refer me. Despite their precious advice, I waited until the JMA committee meeting, which was to take place on the following Thursday, and consulted Dr. Masayuki Taniguchi, a former assistant professor of the Jikei University Hospital Cardiology and Internal Medicine Department.

I visited Dr. Taniguchi for an examination on Saturday and received some tests including an angiography using the latest CT scan equipment with a contrast agent. Early the following week, Dr. Taniguchi phoned me to tell me that I had

stenosis in the left coronary arteries—one was 75% and the other was 50%—and that I needed to immediately undergo testing and a procedure via cardiac catheterization intervention.

Cardiac Catheterization Intervention

On August 20, I was admitted to the Jikei University Hospital Cardiology and Internal Medicine Department to receive tests and treatment by a team of physicians specialized in cardiac catheterization intervention led by Dr. Takayuki Ogawa. A day after my hospitalization, I underwent an angiography that involved catheterization from my right brachial artery to the coronary arteries. During the procedure, the team found that the right coronary artery was almost 100% blocked. They also found curved and coiled up left coronary arteries. Suffice to say, my heart was in a complicated situation.

I was re-hospitalized, with a target operation date of August 26. Because the previous test had revealed strong curvature in one of the brachial arteries, Dr. Ogawa suggested inserting a catheter from the artery in the right lower thigh to treat the stenosis in the right coronary artery. According to the pre-operation briefing by Dr. Ogawa, inserting a catheter to the blocked right coronary artery was likely to be a challenge, so the procedure would be stopped if the intervention did not proceed successfully for 2 hours in consideration of my stress. The series of procedures that I underwent only used local anesthesia to secure a line to insert the catheter to the artery. Thus, a patient could fully hear the sounds of the operation room as long as his/her hearing was intact.

Dr. Ogawa was correct in anticipating that

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

the procedure would be extremely difficult. One hour had passed since I entered the operation room, and I could overhear the conversation between Dr. Ogawa and other surgical staff, indicating that they were having trouble since the catheter could not reach the target spot. I do not remember how many times I heard such conversation. Dr. Ogawa was making various attempts, such as comparing the images from the previous procedure to the ones taken then and changing the line gauge. Then, he was silent for a while, and said something in a firm voice that suggested to me that he had made a decision. The procedure was resumed. Then, suddenly, Dr. Ogawa said to me, “We did it, it went through so we can go ahead and proceed.” When I heard his words, I thought that the heaven in its mercy had extended my life.

The procedure continued for another 30 minutes or so. When the X-ray imaging device located at the top of my head was moved away, I could see Dr. Ogawa’s face on my right. On my left, I could also see a video screen, in which Dr. Ogawa was explaining the procedure to the young physicians in his team. I could see the blood flowing freely in the right coronary artery in which the stenosis had been found during the last procedure, which told me that the procedure had been a success. When he was not sure if he should go right or left, Dr. Ogawa stopped all movement for a moment, compared and examined past materials and current ones, and made a final decision based on his accumulated experience. I was very impressed with his attitude.

On September 9, I was hospitalized for the third time to undergo the procedure for my left coronary arteries. Those were the ones that Dr. Taniguchi had found in a CT scan. The artery with 75% stenosis was meandering and jumbled up, and the first 40 minutes to reach the target spot posed an extreme challenge. I could hear the word *accordion* in their conversation, and I experienced a strong constricting pain in my chest for the first time in my life. However, the procedure went smoothly after that, and the entire procedure was completed by installing 3 stents in my left coronary arteries. That made 4 stents in my coronary arteries in total, since 1 stent had been installed during the last procedure on my right coronary artery (**Fig. 1**).

According to Dr. Ogawa’s explanation, he had stopped the blood flow temporarily when he

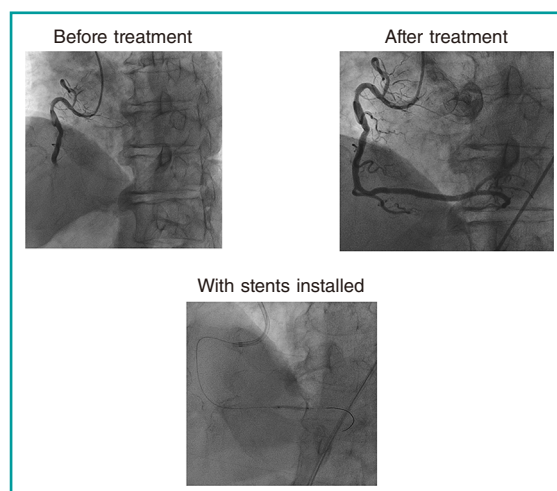


Fig. 1 Right coronary arteries

was installing a stent at the spot with the 75% stenosis. It was the same condition as a myocardial infarction attack and the pain I had experienced had been that of a myocardial infarction. The pain I had experienced during the procedure was different from that of July 10; this time it was stronger and a clearly different type of pain. The day before I was released from the hospital, Professor Ikuo Taniguchi explained to me that the right coronary artery that had been blocked almost 100% was a new stenosis; however, it had not caused serious damage because the left coronary arteries had extended fine vessels to compensate.

Until I experienced this episode, I had never imagined that I would suffer cardiovascular disease myself. I am specialized in medical accident cases, but, after all, I am still an amateur in medicine. My ignorance of the disease caused me to delay my first hospitalization for over 1 month after the first sign. Many of my friends later told me that it is common sense to visit a specialist after the first signs appear, and that there have been more than a few cases in which people passed away while no one was aware of what happened. They repeatedly said that my surviving this whole ordeal was a near miracle and that I was lucky.

As the proverb “ignorance is bliss” says, I was walking on a very fine line between life and death without realizing it. Fortunately, I had not had another attack during the 1 month I had

waited, and I was lucky to be in the care of Jikei University Hospital's best team, led by Dr. Ogawa, immediately after my hospitalization. I literally managed to "make a narrow escape from death," thanks to the blessing of state-of-the-art modern medical technology. I am deeply indebted to the efforts of Dr. Ogawa and many other physicians and medical staff as well as the gift of Divine Providence.

Pictures of Mt. Ontake's Eruption Taken from an Airplane

During my hospitalization, I asked several times if I could travel by air after the procedure because I had plans to visit Takamatsu in late September and Helsinki in November. The physicians' answer was that long-distance travel including an airplane trip would be possible as long as I drank plenty of fluids and took my medication as instructed.

So, although only 2 weeks had passed since I had left the hospital, I took a flight to Takamatsu to attend a meeting there as a test at my own risk. When I arrived at Haneda Airport after 10 a.m. on September 27, the airplane used for my flight had been changed to a Boeing 787. This latest model has a somewhat shady history at Takamatsu Airport: an airplane of this model had to make an emergency landing there due to an electrical system failure soon after the model went into service. The model was out-of-service for a long time while the cause was under investigation. It was eventually brought back to service even though the cause remains unknown, thus the 787 has something of a past.

I boarded at 11:50, and there were not so many passengers that all seats of aisle 10 on the right side were unoccupied. So, I sat on the window side with my iPad mini with the permission of the flight crew. The plane took off shortly after 12 noon, and I soon fell asleep. When I woke up and casually looked out from the window to toward the ground, I saw 3 rivers running in parallel—the Kiso, Nagara, and Ibi Rivers—from a bird's-eye view, which I have not seen in a while. I turned on my iPad, but I missed my chance for good pictures because some clouds had covered the view. I reluctantly started to look above the clouds, and I noticed a strange-shaped cumulonimbus cloud. Thinking its shape interesting, I hastily took a few pictures of it.



Fig. 2 Volcanic smoke from Mt. Ontake seen on board

Afterwards, I took some more pictures, such as of my own face and a lake that was presumably Lake Biwa, and then fell into a light sleep again (Fig. 2).

That afternoon, there were a few seminars followed by meetings. The JMA President, Dr. Yoshitake Yokokura, arrived in Takamatsu after 10 p.m. He had just returned from the CMAAO General Assembly in Manila 2 days prior, and still he had flown from Fukuoka to Nagano early that morning to attend a meeting and then had flown to Takamatsu via Osaka. When he arrived in Nagano, he had heard for the first time that Mt. Ontake, which was in Nagano and Gifu Prefectures, had erupted, forcing the prefectural governor to miss the meeting in Nagano. Apparently, things were rather chaotic in the affected area.

That night from my hotel room, I sent out a group e-mail of the *Ka-cho-fu-getsu* News with the pictures that I had taken of the cumulonimbus cloud, my face, and the Takamatsu Castle ruins.

After returning to Tokyo in the late afternoon of the next day, I took another look at my iPad pictures from this trip before going to bed. As I was looking at the cumulonimbus cloud in question in my pictures, which were time-stamped at 12:41, I realized that this cloud was not a cumulonimbus cloud at all, but rather the first fumes from Mt. Ontake. It was taken immediately after I saw the Kiso, Nagara, and Ibi Rivers, so the pictures were of the eruption in the south. I enlarged the screen, and I could

see what could have been a mountaintop. “This is a big scoop,” I thought.

Then, a thought occurred to me. Just as I was becoming airborne to confirm that I had made a narrow escape from death, Mt. Ontake erupted suddenly due to a gas explosion, striking hundreds of hikers who were enjoying their lunches and the landscape at the 3,000m-class summit. The media reported that this eruption was a serious event that had resulted in the most number of casualties since World War II in Japan, and that most of the casualties had been caused by people being hit directly by pieces of rocks that had burst out in the initial explosion. Although unexpectedly, those 3 pictures I had taken with my iPad mini—what I thought was a strange-looking thundercloud or cumulonimbus cloud—are in fact showing the fumes of

the gas explosion that had resulted in dozens of casualties.

Half a century ago, it would have been unthinkable for this many hikers to be climbing a 3,000m-class summit in late September. Motorization has expanded the network of roads to cover mountainous areas, making it easier for even amateurs to challenge high summits as long as the weather is good. It is very regrettable that behind the numerous casualties of this incident lies the development and dissemination of modern civilization.

Since ancient times, Mt. Ontake has been an object of worship for those who have lived in western Aichi Prefecture. I would like to end with a prayer for those hikers who unexpectedly lost their lives or were hurt for their peace or recovery.

e-JMAJ Editorial Office

JMAJ Editorial Office is within the International Affairs Division of the Japan Medical Association (JMA), which has been comprised of a maximum of 5 staff members since I joined this division about 17 years ago.

The contents of the journal are basically planned by the Editor in Chief/an Executive Board Member of the JMA, Managing Editor, and two Senior Editors of the Editorial Office. The journal aims at providing information on health care and medical science in general in Japan and on JMA's policies and activities.

Although JMAJ has been mostly free, and complimentary copies were distributed to health and medical related organizations and libraries, it used to be sold by a few book sellers such as Maruzen and Japan Publications Trading for 600 yen (about 5 USD) per copy. It became entirely free starting with JMAJ Vol.49 No.5&6 in June, 2006. When the publication in paper format

ended in January 2014, it became a free, electronic journal, “*e-JMAJ*.”

In this Internet age when many people can transmit information widely and freely online, the Editorial Office places an emphasis on offering additional value, something different from the JMA's website and social networking service, to the JMAJ. JMA has a broad human network in Japan as well as around the world, and its ability to invite special authors to contribute is an example of JMAJ's strength.

Japan, as one of the wealthiest countries, needs to share more information on the activities in Japan in English, for others to learn from. This small Editorial Office is committed to make a unique contribution to global health by publishing JMAJ.

Mieko HAMAMOTO, Senior Editor, JMAJ; Assistant Manager, International Affairs Division, Japan Medical Association (hamamoto@po.med.or.jp).



JMA International Affairs Division: (from left) Hisashi Tsuruoka; Yuji Noto, Manager; Mieko Hamamoto; Kazue Igarashi; and Michiyo Takano



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.

