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## Why Our “Grand Design 2007” Is Needed —The JMA strategic plan for Japan’s healthcare in the near future—

JMAJ 50(4): 277, 2007

Yoshihito KARASAWA\*<sup>1</sup>

The Grand Design 2007, published in March 2007 by the Japan Medical Association, is an effort to establish the conceptual basis for how the Japanese healthcare system should be in 10 years. The Japanese version has been edited and translated into English so that it can be a useful resource for healthcare professionals in other countries to know about the JMA’s strategic plan.

In Japan, all people are enrolled in public health insurance. The national government assures that as long as people pay health insurance contributions, and a co-payment at the time of service, they can receive appropriate health care at any healthcare institution at any time. This is the security of “free access,” which is one of the most exceptional features of Japan’s universal health insurance system. While also protecting their professional autonomy, Japanese physicians have worked tirelessly to develop and maintain the world’s most fair and equitable healthcare system, at a comparatively low level of health expenditure. As a result, physicians in Japan have earned the high respect of the people.

But now, as Japan confronts the aging society, there are growing calls to contain healthcare costs. Changes are happening that shake the foundation of the public health insurance system. For example, even though the aging society is already here, the number of facilities for long-term care are being reduced, and co-payments for patients have been increased. These measures are an erosion of the fundamental principles of universal health insurance.

Japan has adequate financial resources to provide sufficient healthcare for all of its people. This point must be remembered by those who are responsible for providing healthcare everyday. Instead of becoming discouraged in the face of a diminishing equilibrium in healthcare, physicians must develop plans for a better future. The Grand Design was developed as the first step towards implementing the JMA vision of Japanese healthcare.

The first pillar of the Grand Design is the restructuring of the public health insurance system. The Health Insurance Program for the Elderly to be introduced in 2008 should be a basic security provided by the national government. The elderly people should be able to live without insecurity due to income disparities. Therefore this proposal raises the benefits and provides funding primarily from government spending rather than an insurance system. The second pillar re-examines the meaning of social security. An analysis of national fiscal resources demonstrates that healthcare should be the core of social security.

The Grand Design 2007 uses these two pillars built on the needs of the people in order to evaluate the current healthcare delivery system, analyze what needs to be restructured, and how the burden should be distributed among the people.

According to WHO health indicators, Japan has managed to be the best in the world. It is greatly hoped that this English version will help others to understand the health insurance system and social security in Japan.

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

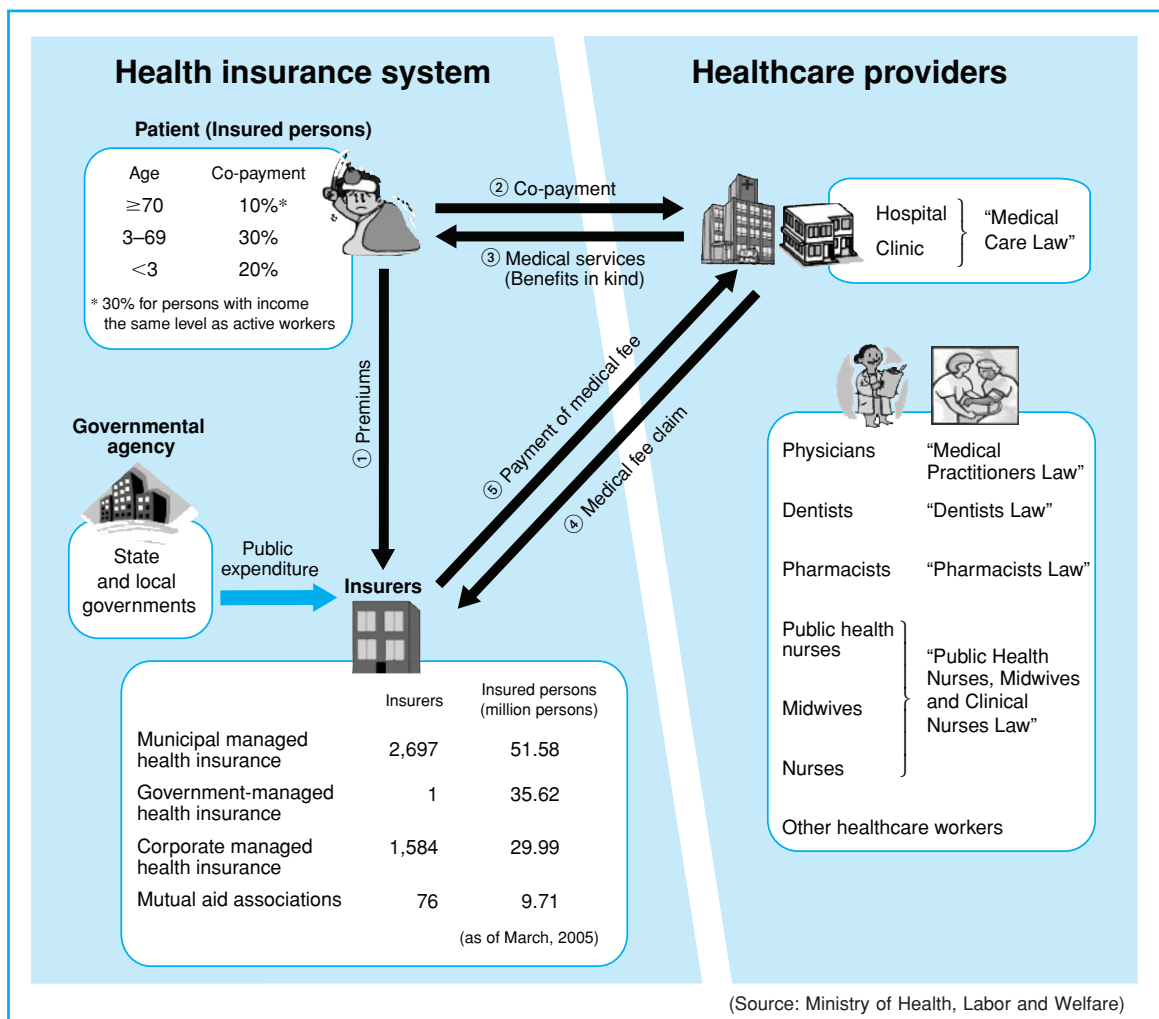


Fig. 1 Relations among patients, providers and insurers in Japan's healthcare system

Here is a broad overview of central features of the Japanese healthcare system.

All citizens pay premiums to their insurers. The premium amount is set by each insurer (see Fig. 1).

Japan has a universal health insurance system. In Japan, someone who is sick is in principle free to choose any healthcare facility (hospital or clinic) to receive treatment, simply by presenting an insurance card which is the government-issued proof of insurance and paying a small co-payment at the time of treatment. This is the basic outline of receiving and providing medical care in Japan (Items ② and ③ in Fig. 1). Healthcare facilities that provide medical care file an insurance claim for the costs of treatment. Insurers pay the

healthcare facility after determining if the claim is reasonable (Items ④ and ⑤). All insurers are national government organizations.

Under universal health insurance, all citizens must belong to an insurance program (Fig. 2). Premiums are paid in each insurance program. The Japanese health insurance system comprises a diversity of insurance plans and a large number of insurers, and wide differences exist in benefit rates and premiums. However, patients bearing an insurance card pay a uniform proportion of co-payments anywhere, anytime and whoever they may be. The same applies to dentists. Furthermore, healthcare is free of charge to persons dependent on public assistance. The national health expenditure shown in part A of Fig. 3

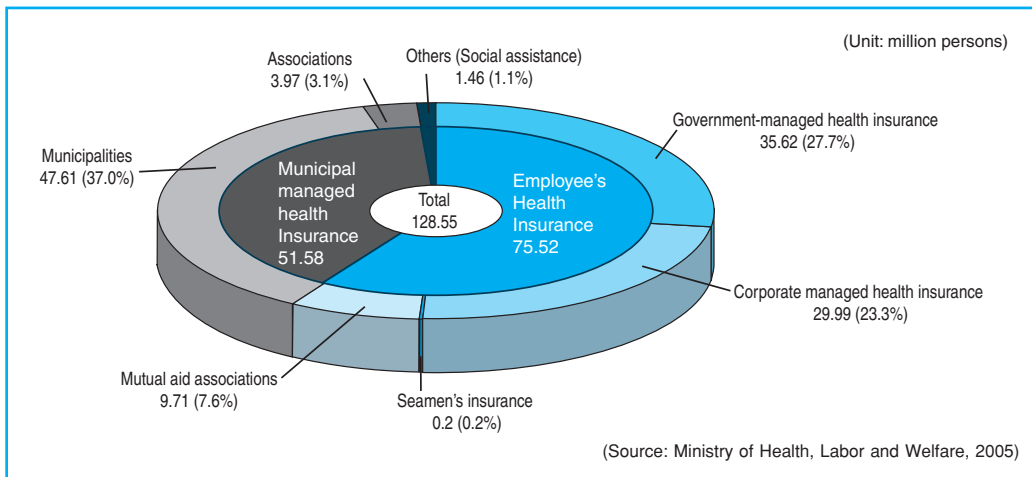


Fig. 2 Japan's universal health insurance system

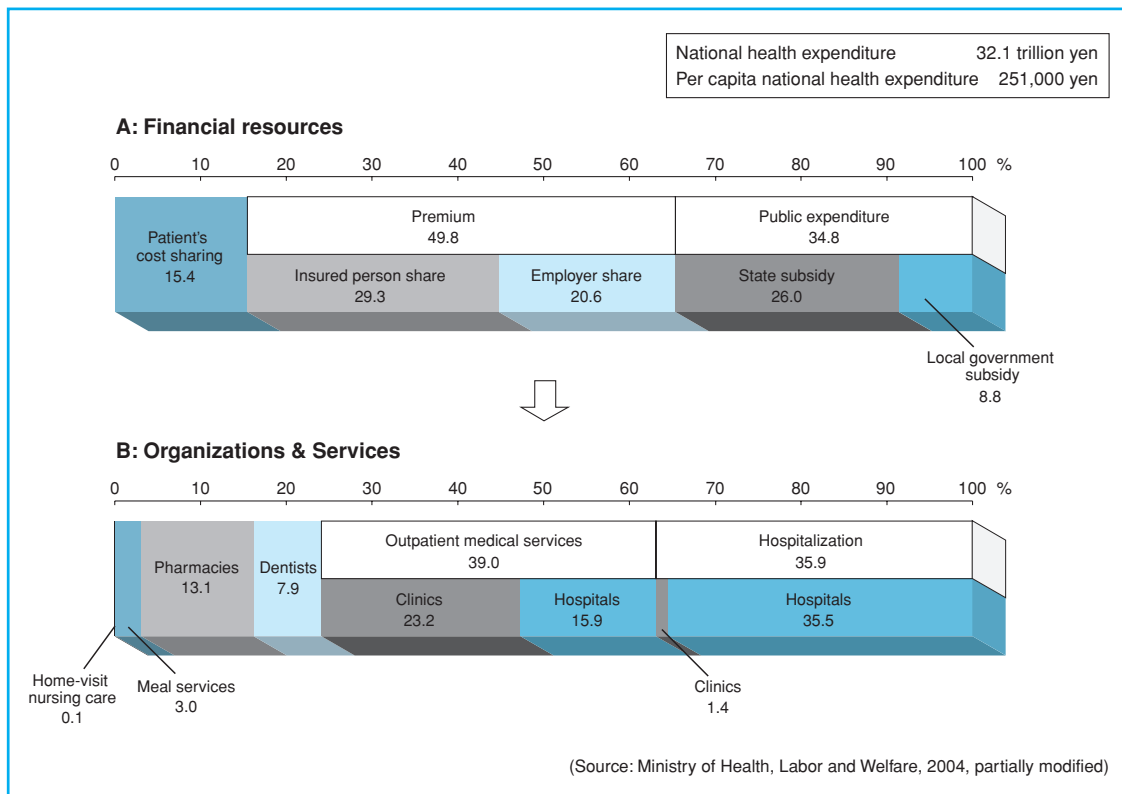


Fig. 3 Cost sharing ratio of national health expenditure

shows how the health expenditure for each individual enrolled in each health insurance program is financed. In 2004, national health expenditure was about 32 trillion yen or 279 billion US dollars, and was financed by premiums, co-payments, and

public expenditure. Part B of Fig. 3 shows the kind of patient care. Most of Japan's health expenditure is for hospitalization and outpatient medical services.

*Grand Design 2007**Attaining the Best Public Healthcare for All Generations in Japan— Chapter 1***Toward Realization of Most Appropriate Healthcare**

JMAJ 50(4): 280–299, 2007

**1. Healthcare Desired by the Public**

The primary characteristic of Japan's public health insurance system is free access which enables all citizens to receive sufficient healthcare directly at any health institution anywhere in Japan at any-time with a certain amount of co-payment.

The Health System Reform related bills were enacted in June 2006 in the name of creating a sustainable system. Reform measures include rearranging the number of long-stay beds and allow an increase in patient co-payments, and therefore have resulted in less accessible healthcare with disregard for the growing needs of an aging society. Raising the ratio of patient co-payment may also lead to restricted opportunities for consultation and widen the disparities among rich and poor individuals. These reforms also limit access to healthcare by reducing the number of short-stay beds, shortening the average length of hospital stays and readjusting the number of long-stay beds.

There is a growing apprehension among the public about the expansion of differences in healthcare treatment. This underscores the urgency for a general improvement that will allow people to receive sufficient high quality healthcare. Healthcare costs in Japan are controlled at a low level as compared to other advanced countries (refer to p.16, Chapter 1 Section 3. Economic Power and Healthcare Resources). Containment of healthcare costs may make it difficult to deliver appropriate care. Physicians may have to endure an excessive work load, which can only produce a

negative result for the public and patients.

Japan has reached the longest average life expectancy in the world, but it is not for sure to say that the public in Japan are all satisfied with the healthcare and its system. It is also necessary to validate that Japan has an appropriate system and environment to accurately evaluate the level of healthcare provided and improve it.

From these perspectives, the Japan Medical Association Research Institute (JMARI) conducted in 2006 "The second awareness survey related to healthcare in Japan"<sup>1</sup> in its second trial following the 2002 survey. This aimed at ascertaining the views and needs of the patients and healthcare providers.

The chapters 2, 3 and 4 (to be published in the later issues of the JMAJ) will discuss future healthcare from the viewpoint of what type of healthcare the public is seeking and what needs to be improved to allow the medical profession to provide sufficient quality care.

**(1) Public demands****1) Satisfaction with healthcare in Japan**

The current survey clearly shows that there is a high degree of satisfaction with healthcare actually received, but a low degree of satisfaction with healthcare generally including its system.

Eighty-three point six percent of the public and 88.5% of patients treated at healthcare institutions answered that they were "Satisfied" or "Somewhat Satisfied" (Hereafter, this combined proportion shall be termed "satisfaction degree.") (Fig. 1-1-1). The public satisfaction degree was 92.5% if they have a family physician, while the satisfaction

<sup>1</sup> The survey was conducted in March 2006 with three groups the public, patients, and physicians as the objective. The public nationwide sample was 2,000 individuals (male/female) over the age of 20. The effective response (rate) was 1,364 (68.2%) based on individual listening interviews. The patient sample was based on 979 persons (male/female) over age 20 at 40 healthcare institutions nationwide by interview method (combined fill-in and mail-in methods). The physician sample was 3,000 nationwide by a mail survey method with an effective response (rate) 1,288 (42.9%) of which (hospital-employed (684), clinic-employed (575), and other (29)). Narumi Eguchi "The Second Awareness Survey related to Healthcare in Japan" JMARI Working Paper No.137, December 2006. (J)

The titles of Japanese materials listed in the footnotes are translated by JMA and indicated by (J) unless they have an English version.

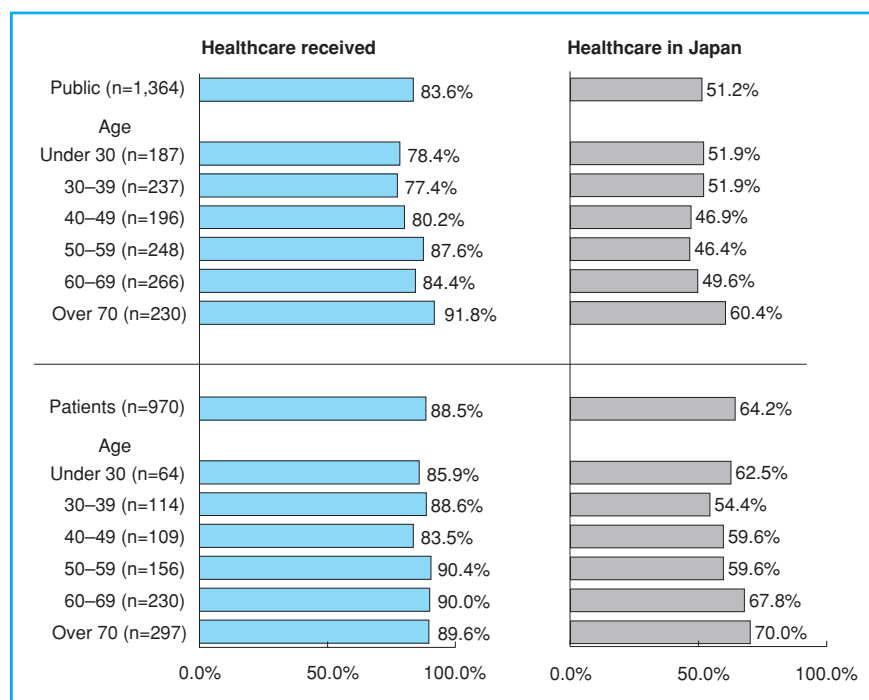


Fig. 1-1-1 Satisfaction level with healthcare received and healthcare in Japan—patients and general public

degree was 70.7% with no family physician.

The satisfaction degree for healthcare in Japan generally was 51.2% for the public, and 64.2% for patients. The satisfaction degree is low compared to satisfaction with healthcare actually received. There is a clear gap between the satisfaction degree for those who actually received healthcare and that for healthcare in Japan generally. The difference between the degree of satisfaction with healthcare, “the satisfaction degree with physicians and healthcare institutions” and “the satisfaction degree with healthcare generally” is easily confusing.

The public’s satisfaction degree is high when they have a family physician. This is an evidence that the public has a positive evaluation of relations with their own family physician although there is dissatisfaction with problems in terms of the overall healthcare system.

The satisfaction degree with waiting time is 51.9% and that with healthcare costs is 61.6%, both of which are low when looking at the satisfaction degree for received healthcare by items

(Fig. 1-1-2). Among these, the satisfaction degree with waiting time drops further to 28.0% only for those unsatisfied with the physician’s explanation. This suggests that sufficient physician explanation cancels out the dissatisfaction even when the waiting time is long.

## 2) What is end-of-life care for the public?

Respondents were asked in which location they would prefer to receive end-of-life care in the event that they had terminal cancer with no outlook for recovery.

In the public survey, 33.8% of respondents selected care at home while 30.5% preferred a palliative care facility, such as a hospice. In the patient survey, 25.8% preferred in-home care and 33.3% preferred care at a palliative care facility. This means that demand for care at home or in a palliative care facility was roughly equal. (Fig. 1-1-3).

Actually, the number of Japanese who passed away at home did not exceed 12.2% in 2005 and has continued to decline from 82.5% in 1951.<sup>2</sup>

2 The Ministry of Health, Labor and Welfare “2005 Population Demographic Survey.” (J)

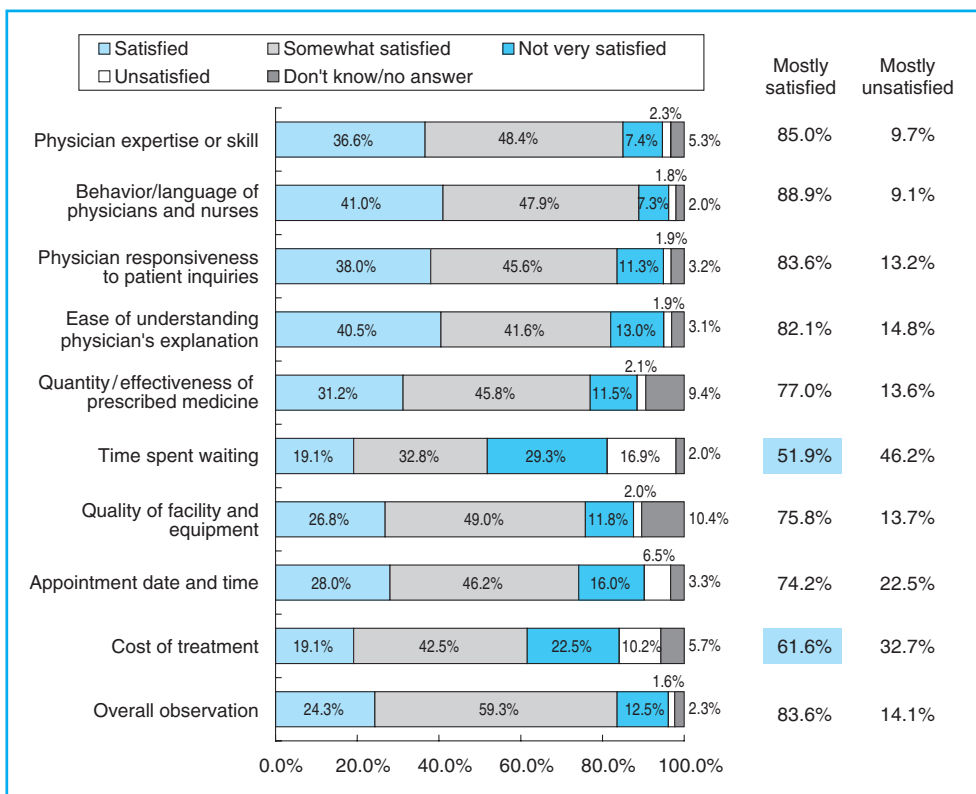


Fig. 1-1-2 Satisfaction level with healthcare received—public (n=1,274)

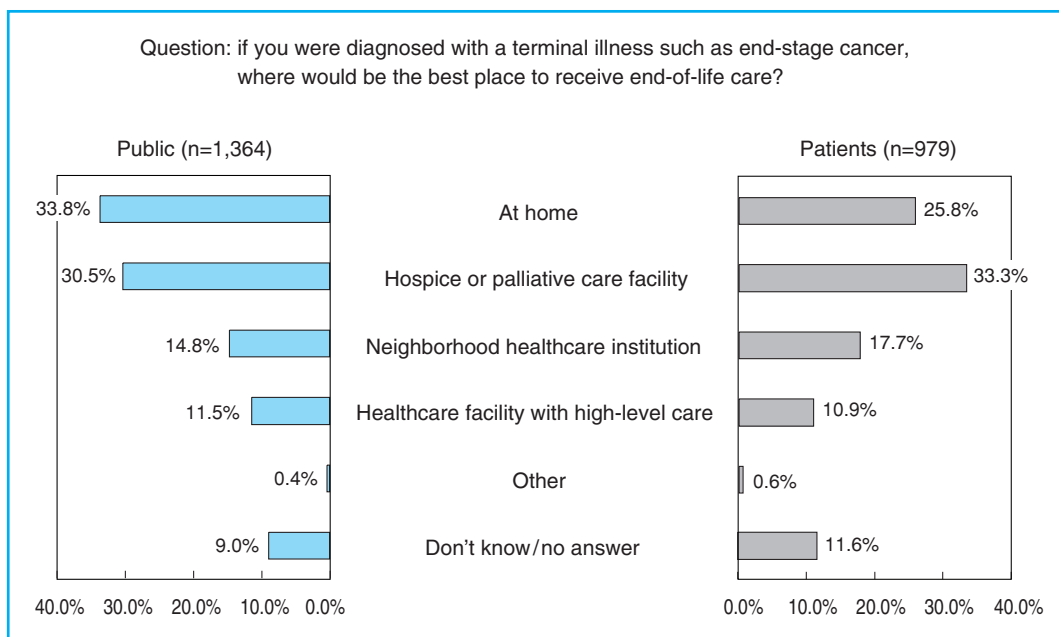


Fig. 1-1-3 Preferred location to receive end-of-life care



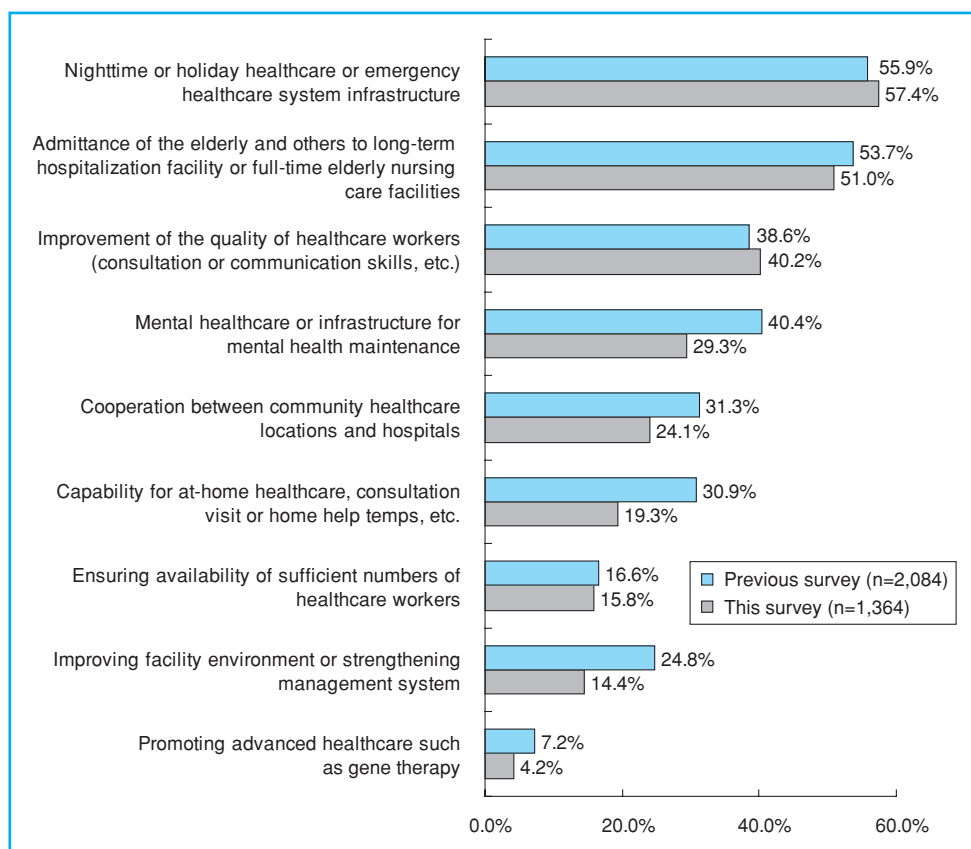


Fig. 1-1-4 Important topics for healthcare—public (multiple answers allowed)

Location is very important at the time of death and the individual should be afforded all due respect in the midst of healthcare. In terms of the important decision on the location of where to spend the final time passing, it is essential to provide care in accordance with the life and death beliefs of each individual.

## (2) A desirable healthcare delivery system

### 1) What is the needs of the nation to the healthcare delivery system?

The survey results show that the utmost need is the upgrading of the night time/holiday and emergency healthcare system. Other highly-ranked demands identified by the survey are to provide admittance to long-term care faculties for the elderly and others, followed by to improve the quality of health workers (Fig. 1-1-4). These two items also appeared as high need items in the previous survey.

The Ministry of Health, Labor and Welfare

has an ideal of “sending elderly persons back to their residence” which places a high priority on treating this type of person at home, but it is clear that the public strongly desires maintaining inpatient healthcare facilities for elder healthcare.

### 2) What is the role of family physicians in Japan?

Having a family physician mitigates the concern and dissatisfaction of the public with the healthcare system as a whole. The problem is what the physician-patient relationship for a family physician should be.

In the current survey, the satisfaction degree of the public having their family physician who have received healthcare is 92.5% and the satisfaction degree for the public not having their family physician is 70.7%.

Ninety percent of the public needs the family physician to take the necessary time for appropriate specialist referrals, and 80% desire that first they have a consultation no matter what the

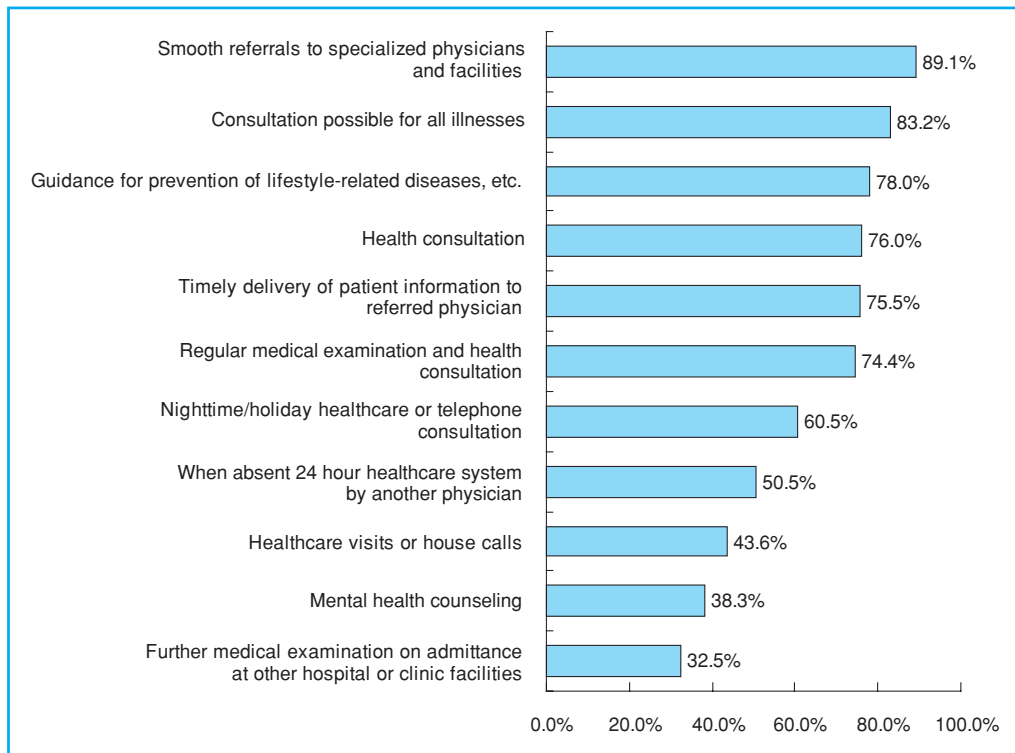


Fig. 1-1-5 Desirable healthcare system with family physician—public (n=1,364) (multiple answers allowed)

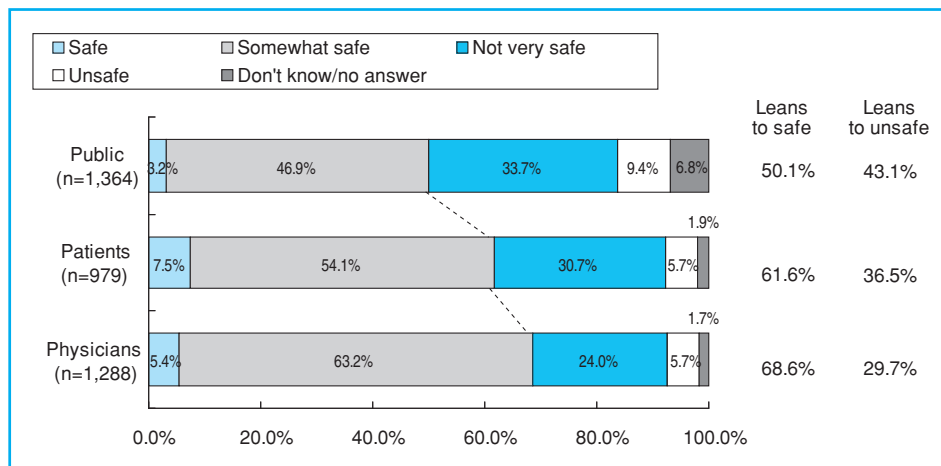


Fig. 1-1-6 What do you think about safety at healthcare facilities?—public, patients, and physicians

illness is. Also, approximately 80% of the people seek advice of the family physicians for knowledge about prevention of lifestyle-related diseases, etc. (Fig. 1-1-5).

Thus, there is a basic need for family physi-

cians in close cooperation with other healthcare institutions to meet the need for community healthcare. There are also demands from patients for health guidance and advice on prevention of lifestyle-related diseases. This means that

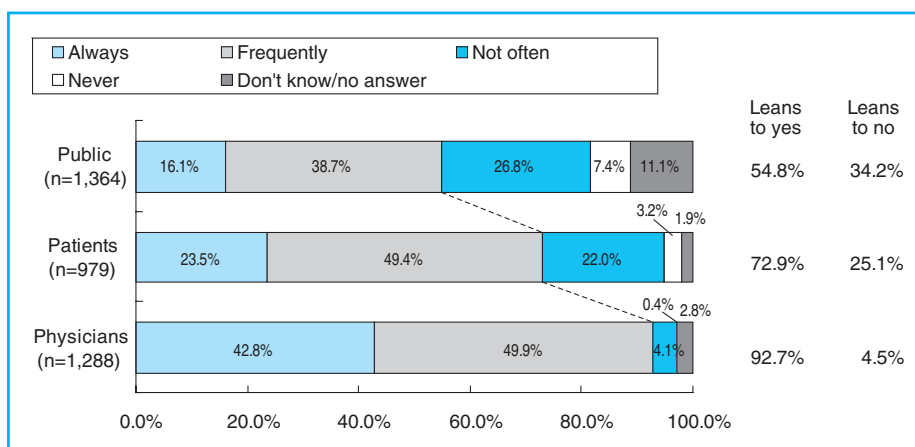


Fig. 1-1-7 Is healthcare being tailored to individual circumstances?

the family physician is not just expected to treat patients, but also to provide a continuity of healthcare from prevention onward.

### 3) Awareness about patient safety

The portion of the public which think “healthcare organizations are safe” is 50.1% and the proportion for patients is 61.6%. The proportion believing it is safe is higher as compared to the previous survey (public 47.8%, patients 57.4%). However, in contrast, those who think they are “not safe” rose to 43.1% of the public and 36.5% of patients (Fig. 1-1-6).

Of those who believe “they can have sufficient conversation (with the physician),” 57.3% “believe healthcare institutions are safe”, while of those who believe “the conversation is insufficient,” 43.4% “believe healthcare institutions are safe,” a significant difference. The proportion of people who believe healthcare is safe is higher among those who believe that they have good communication with the physician.

Physicians and healthcare institutions should fulfill expectations for accountability for their patients as well as other challenges for patient safety.

### 4) The current physician-patient relationship

While almost all physicians think that they are

providing individualized healthcare, fewer patients receiving care consider this to be true, and even fewer members of the general public.

When asked “Do you receive healthcare that takes into account your individual characteristics, position, and desires,” 54.8% of the public and 72.9% of the patients, “yes.” The proportion of both groups responding that they do receive individualized care rose compared to the previous survey (public 38.4%, patients 66.4%).

However, a higher proportion of physicians, 92.7%, believe they are providing patients with individualized healthcare. A divergence is surely observed here (Fig. 1-1-7). Physicians need to humbly accept this fact.

This divergence seems to be a phenomenon specific to Japan. In an international survey, responses to the same question showed a large divergence between the awareness of physicians and patients only in the case of Japan. In the United States, France, and Korea, the divergence was less than that in Japan for patients and physicians.<sup>3</sup>

Causes for this wide gap may be the relatively high level of patient demands and high expectations, together with a fact that physicians are excessively busy with additional work to do other than consultation and treatment and cannot have

3 Regarding the question about the degree to which “physician listens well to patient,” respondents indicated that physicians listened well to patients (over 7 points on a 10-point scale) for <Japan> public: 43.6%, physicians: 92.4%, <U.S.> public: 82.8%, physicians: 98.0%, <France> public: 91.1%, physicians: 93.9%, <Korea> public: 65.2%, physicians: 78.4%. Source: Narumi Eguchi/Naoko Numata “International comparison of awareness regarding healthcare in four countries on a regional town and city basis,” JMARI Working Paper No.105, October 2004. (J)

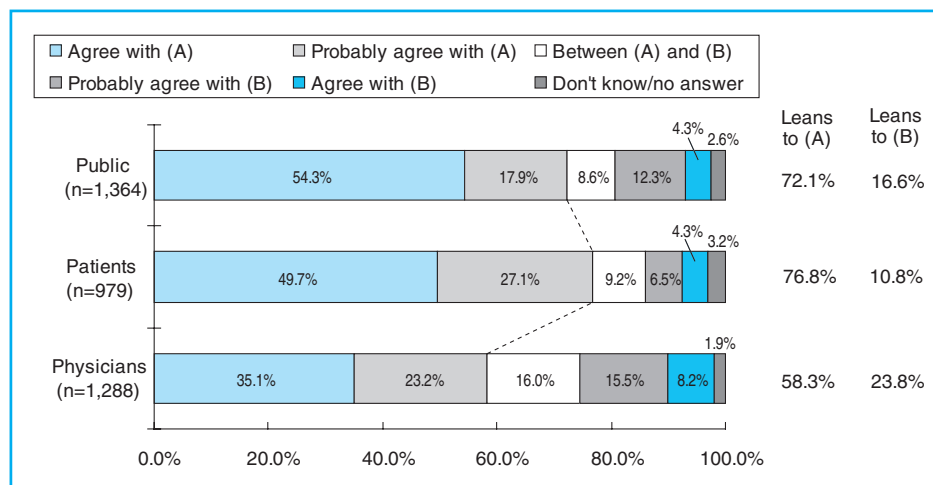


Fig. 1-1-8 Health insurance: same healthcare for all regardless of income (A) or options for wealthier to pay for additional services (B)?

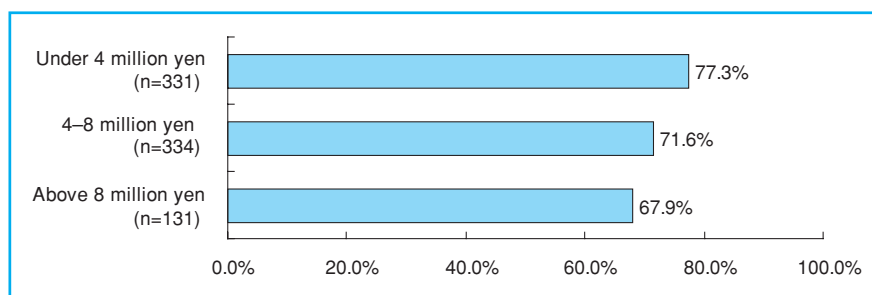


Fig. 1-1-9 Proportion that agree healthcare should be allocated without regard to income (public) by annual family income (120 yen=US\$1)

enough time to communicate sufficiently with their patients.

**(3) The healthcare insurance system best for the public**

The public clearly wants to maintain the best parts of the current healthcare insurance system.

Under current health system reform by the government, the number of beds has been reduced, which has limited access to healthcare. This reform includes the start of so-called “mixed healthcare” which is based on the payment practice both by the public health insurance and patients themselves, and introduction of an insurance system with deductibles. If these changes are fully implemented, they will result in difference in healthcare treatment based on differences in income.

According to the current survey, over 70% of the public and nearly 80% of patients preferred that there be no difference in healthcare received based on differences in income (Fig. 1-1-8). On this point, there is little change from the previous survey (public 71.4%, patients 73.9%).

Physicians are less likely than the public and patients to agree with the idea that there should be no difference in healthcare received based upon income differences. This reticence can partly be explained by concern that certain kinds of medical treatments are not covered by the health insurance.

These require for steady maintenance of the public health insurance and expansion of its scope. The scope of public insurance must not be reduced because it will surely create more

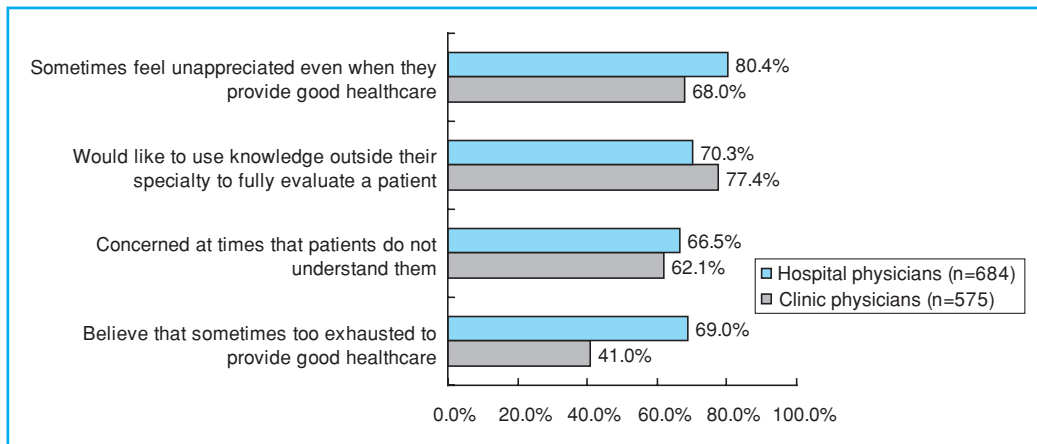


Fig. 1-1-10 Physician issues—hospital physicians and clinic physicians (multiple answers allowed)

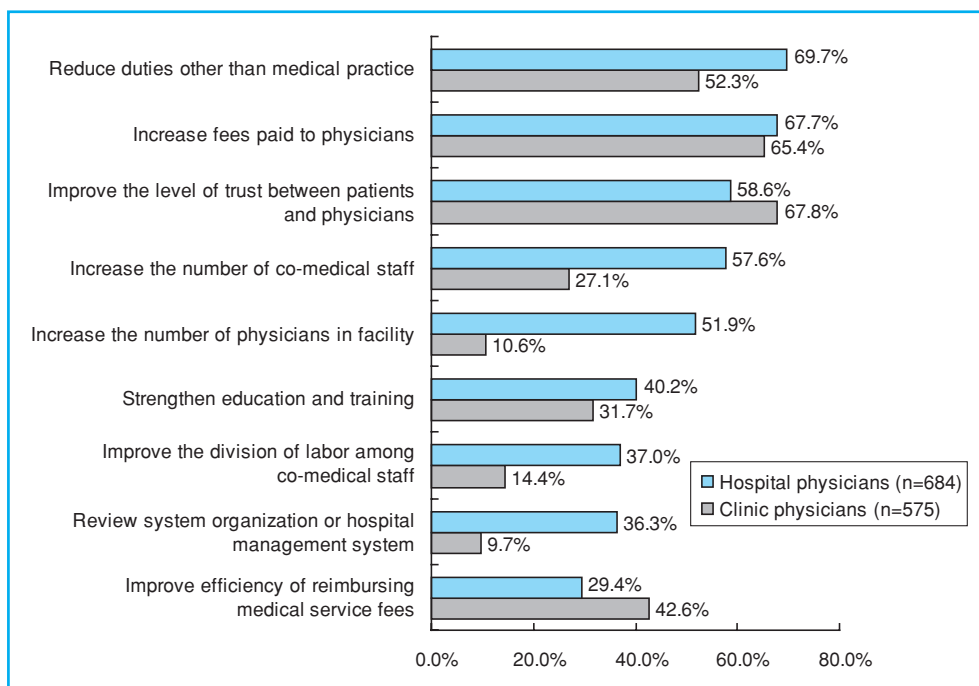


Fig. 1-1-11 Reforms or environmental improvements to practice better healthcare—hospital physicians and clinic physicians (multiple answers allowed)

disparity between rich and poor in healthcare.

Concern about inequality in healthcare rises at lower levels of income. Seventy-seven point three percent of people with an income below 4 million yen (US\$33,000) agreed with the statement that people should receive equal healthcare, compared to 71.6% of people with incomes

between 4 and 8 million yen, and 67.9% of people with incomes above 8 million yen (US\$67,000) (Fig. 1-1-9).

Inequality of healthcare based on income will be an increasing problem in the future. The rising number of elderly will also raise the proportion of low income families, since they have different

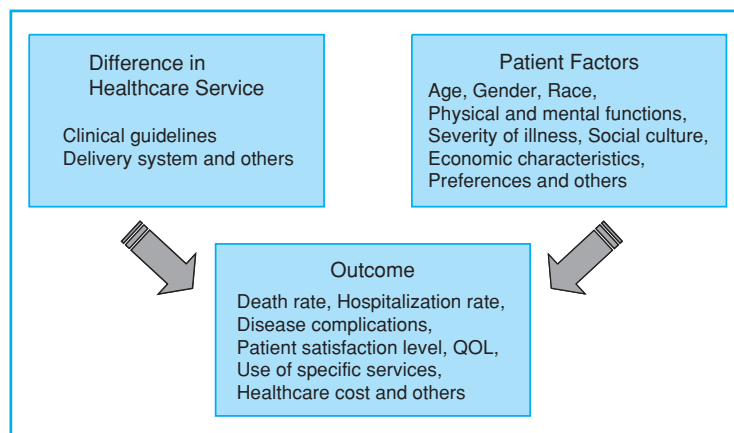


Fig. 1-2-1 Factors contributing to healthcare outcomes (fundamental concepts)

earning power than in their early years and it is easy for the income (including assets) difference to widen. If this trend continues and the number of low income elderly increases, the national concern about inequality in healthcare will become stronger. This is one more reason why the scope of the current public healthcare insurance should not be reduced.

#### (4) Basic requirements for better healthcare

The survey of physicians revealed that physicians are exhausted, feel that they are not fully appreciated and are concerned that the patients do not understand what they say (Fig. 1-1-10). In order to raise the level of confidence of the public in healthcare, the environment in which healthcare is practiced should first be improved so that the physicians themselves are reassured that they can practice reliable healthcare (Fig. 1-1-11). For such an improvement, it is necessary to share physician problems with both the general public and patients in order to build mutual understanding. The JMA stands ready to improve the environment to help physicians build better relationships between patients and physicians.

## 2. Management of Healthcare Quality

### (1) How to evaluate healthcare quality

Currently in Japan the legal prosecution of medical accidents stands at odds with the best practices for improving healthcare quality.

It is difficult to objectively measure healthcare quality. Healthcare quality can be evaluated on

the basis of three criteria — (1) Structure (2) Process and (3) Outcome. Evaluating hospital capability by the physical resources such as facilities and equipment and “structure” such as the number of medical specialists is also being adopted in Japan. The evaluation of “Process,” though gradually, is becoming possible by the achievement rate of standardized medicine shown in the development of clinical guidelines and also by the method of joint family monitoring of operating rooms which have been criticized for being too secretive.

There are not yet sufficient comparative measures, such as ones based on the death rate or existence of complications following surgery, or evaluation of the outcomes in terms of a patient or family healthcare satisfaction index, due to the large number of components in the causal framework. (Fig. 1-2-1). Although the public is probably most interested in comparing outcomes, we do not yet have an adequate outcomes measure.

Difficulty to evaluate quality of the process or the outcome of healthcare raises numerous questions. Recently, the field of healthcare has been rocked by medical error disputes brought with criminal complaints; one reason for the increase in lawsuits may come from the fact that the quality of healthcare is not shown objectively such as in quantified data in Japan.

In medical care disputes in Japan, there is currently a confusion coming from two types of risks in healthcare. The first is the traditional civil lawsuit, and one more is criminal code prosecution of healthcare disputes as symbolized by

the Fukushima Prefecture Ohno Hospital case<sup>4</sup> (criminal law risk). The Ohno Hospital case was related to the death of the mother during caesarian childbirth, whereby responsibility was pursued for physician negligence in performance and violation of notification responsibility (Medical Practitioners Law Article 21 Violation).<sup>5</sup>

As in this case where the patient died, investigative authorities pursue the responsibility of the individual physician, but the vital evaluation of structure and process remains unaddressed. The problem with criminal cases involving physicians is further complicated by lack of a uniform system to accept reports at the police authority having jurisdiction. The handling by the police authority, after a report is submitted, is based on a “determination of case worthiness” which means it is left to an egregiously vague and non-uniform standard. Cases may be pursued or dropped at the arbitrary judgment of a public prosecutor. Moreover, many cases may not even be subject to investigation. The result for physicians and patients and their families is an arduous, difficult to forecast process.

When an error occurs that leads to a medical accident, the most important thing is to sincerely explain the situation to the patient or family. Also from the viewpoint of improving healthcare quality and safety, it is most important to evaluate the clinical process with fair-mindedness to prevent a reoccurrence.

However, current circumstances are far from this. Once a criminal investigation is opened in a death which is suspected from a mishap during practice, the autopsy report is not only withheld from the healthcare institution, but also from the patient and/or family in order to maintain investigation secrecy. Lacking vital information, the healthcare institution becomes atrophied and there is a harmful effect in not being able to conduct an appropriate evaluation of the clinical process.

In Japan, the reason for easily resorting to prosecutorial resolution arises for several facts. In addition to the public not being able to see the evaluation of healthcare quality, there are

few administrative dispute resolution possibilities, and there is no structure in place to accept complaints or resolve disputes with expert testimony outside of the courts. Civil, Criminal, or Government adjudication is one measure to control healthcare quality, but the pursuit of individual responsibility alone cannot detect a system error (not a human error, but an error caused by the organization). If the truth of an accident is left buried, then the lessons to be learned from an accident will not lead to preventing reoccurrences. The current circumstances of over-dependence on handling medical errors as criminal cases only increase the negative aspects such as defensive medicine.

The purpose of evaluating healthcare quality is to maintain and improve the standard of healthcare, but the interposition of criminal justice in healthcare must be seen as a highly counterproductive reversal of purpose and method.

## (2) Responsibility of the patients

A sound physician-patient relationship is the major premise upon which evaluation of healthcare quality is built.

The high level of trust of physicians in Japanese healthcare is symbolized by the expression “I leave every thing up to you.” Accordingly, not just the patients but even the physicians have only a sparse awareness of the principle of “patient responsibility.” However, in aspiring toward healthcare as it should be, it is important to manage healthcare quality that is healthy and balanced. It is basically necessary for both physicians and patients to be correctly aware of both parties’ responsibilities.

According to Code of Medical Ethics 2005 that has the oldest tradition regarding the code of conduct for physicians by the American Medical Association an explanation is made on “physician responsibility” as well as “patient responsibility.”

## (3) Approaches in visualization of clinical indicators

In the advanced nations, P4P (Pay for Performance) has become one trend as a method

4 The case in which a female died from receiving a caesarian section in December 2004 at the Fukushima Prefecture Ohno Hospital. On February 18, 2006 the physician who performed the surgery was arrested on suspicion of an error during a procedure leading to a death and violation of article 21 of the Medical Practitioners Law and was indicted March 10, 2006. Arrest of a physician related to performance of healthcare is extremely rare.

5 Medical Practitioners Law Article 21 states that “A physician is required to submit a report within 24 hours at the police station of jurisdiction when it is confirmed there are unusual circumstances based upon examination of a corpse or when an infant dies in a pregnancy of over four months.”



of evaluating healthcare quality. The attempt to improve healthcare quality by introducing a medical fee payment system in which the fees vary based upon the performance of the healthcare provider has also been referred to as “value-based purchasing.” Benchmarks are not limited to simplistic aggregate measures such as the number of surgeries conducted per facility or the distribution of staff that have been used until now. Instead, it is a new approach to establish multiple quality indicators for one illness which evaluate healthcare quality in terms of both process and outcome.

The actual idea of P4P is not new and has already been adopted by private health insurance companies in the United States. However, in 2004, the National Health Service (NHS) in the UK introduced a trial of P4P for General Practices (GP) and even the U.S. Center for Medicare and Medicaid Services (CMS), has actively begun such an initiative.

As for the NHS, the trade-offs of the healthcare cost regulation policy (efficiency pursuit) over many years under the Thatcher/Major Conservative administration were almost dysfunctional risky conditions: serious patient waiting list issues, shortage of healthcare workers and a drop in morale. In 1997, with the appearance of the Blair administration, healthcare expenses were expanded 1.5 times as a leading initiative under the slogan the “Third Way”<sup>6</sup> and NHS began to accept restructuring with an emphasis on healthcare quality. P4P was introduced as a trial in 2004 for GP as part of this restructuring.

In this test, 10 chronic diseases were the subjects and 146 items of quality, such as content of care or patient satisfaction degree, were established as the evaluation index that totaled from 0–56 points. This index in turn was used in a system to adjust reimbursement of medical fees. Since the goal was to motivate healthcare providers, the British government invested 1.8 billion UK pounds (approx. 3.6 billion yen or US\$30 million) over a 3 year period in order to implement this test.

Although the definition of performance is still under discussion, several negative effects have been pointed out and are listed below.

- 1) The purpose of P4P is to improve healthcare quality, but this effort can also serve as a vehicle for containment of healthcare costs for its own sake.
- 2) The premise for a hospital implementing the P4P program is that has been given the motivation to do so, but, in contrast; there is the real possibility that hospitals that do not carry out P4P could have healthcare reimbursements reduced. This can result in reduction of motivation to pursue better efficiency in healthcare quality and invites the possibility of worsening rather than improving healthcare institution management.
- 3) P4P records can be manipulated by limiting access to healthcare institutions for the poorest segment of the population in order to improve the program implementation rate.

It can be predicted that the debate toward P4P introduction from now will become more active even in Japan. For the Japanese case, it is important to note that the evaluation method is based on concepts centered on efficiency developed for the private insurance field.

There is one more point to be aware of for Japan besides the issues that have been depicted in the UK and the United States. Actually introduction of electronic patient records is not a required item for the Quality Index of P4P specified by the British NHS and United States CMS.

For both the British NHS and the United States CMS, whether the patient record is kept in an electronic or paper format is not a matter of consideration. What is most important for the P4P introductory test is that the prescribed treatment process be followed comprehensively and that accurate treatment and patient records are retained.

In contrast, in Japan it is misunderstood that the quality of treatment will become higher automatically through the introduction of an electronic patient record. Because of this, assuming the momentum for P4P introduction became higher in the future, there is a significant danger that the “imperative to implement a system comprehensively to meet agree-upon healthcare goals” will be replaced by an “imperative to

6 The Third Way: In the past, the Labor Party administration managed the NHS under a central control (The First Way), and the Thatcher/Major Conservative Administration managed under a competitive free market model (The Second Way). In comparison, the Blair Administration followed an agenda focused on (1) Priority of quality of healthcare and fairness over efficiency (2) Focus financial investment on the most essential items (3) Primary Care, Public Health, Evidence Based Medicine (EBM). Koichiro Mori “UK’s Healthcare System (NHS) restructuring from the Thatcher to Blair Administration, and the Present” JMARI Working Paper No.140, February 2007. (J)



implement a computer-based system.” It should also be kept in mind that the fiscal authorities and the Ministry of Health, Labor, and Welfare will take this opportunity to propose the introduction of a management system designed primarily to curb total healthcare expenditure.

The concept of P4P should be examined further if viewed from the point that the evaluation of healthcare quality can be conducted in a quantitative basis. However, sufficient caution about the dangers of cost-containment goals is also necessary in the discussion about whether to tie-in the introduction of an electronic patient record.

#### **(4) A medical error investigation committee**

A medical error investigation committee is important in the evaluation of healthcare quality, particularly of outcomes, and the form of such committees is being actively debated in the healthcare as well as the industrial fields. The purpose of this committee is to “prevent reoccurrence of an error,” and the structure of the committee report has the following sections: “collection and understanding of factual information,” “analysis,” “results,” and “expert opinion/admonishment.” Taking as an example the Fukushima Prefecture Ohno Hospital case described earlier, often this accident report becomes a lead for the criminal investigation. Although in some countries accident reports related to an aircraft accident are restricted by law from use beyond the purpose of “factual information,” in Japan, with the interposition of criminal justice, the obstruction of collection of information in an accident investigation is detrimental to the management of healthcare quality.

For public perception, no matter how much the object of the accident investigation is changed from pursuing personal liability for negligence to a depiction of a system error, it can seem that the result of an accident report without criminal liability is only focusing on uniform “recurrence prevention,” and will bring little relief for victims and their families.

The situation in Japan regarding public perception of accident investigations is shaped strongly by a single event. On August 12, 1985 JAL flight 123 crashed into Mount Osutakayama, Gunma Prefecture killing 520 passengers and crew (4 survived). In the accident report “JAL Flight 123 Crash Report” of the Ministry of Transportation Aircraft Accident Commission of

Inquiry, there was very little information analyzing the manner of the deaths of passengers; instead, the report objective was the aircraft.

The basis of the argument by the investigation committee which appears in the writing of the FAA Safety Commission of the United States “People simply died from the impact of the aircraft body (this was based upon the critical position of two seatbelts in the forward direction in 20–25G). And it was determined all perished except for four individuals. However, from the statement of survivors it is clear that, right after the aircraft crash, conversation with a family, voices conversing in the vicinity, and groaning voices could be heard.

From this indication the concept of “survival rate improvement policy” was born along with research into the safety of seats which could become a deadly weapon in aircraft accidents. The change has been coordinated by shifting from risk management or understanding the risk which could cause an accident toward crisis management or restricting the potential for damage to a minimum when a misfortunate accident occurs.

In medical disputes as well, there should be a change from pursuing legal liability of the individual to depicting the system error, and further the final target of an investigation committee when a medical accident occurs should be to study the improvement of the survival rate. In other words, when looking at the progress in leading edge medical technology and shift to a new vision for healthcare, the change from risk management to crisis management should be closely studied.

#### **(5) For the future discussion**

In recent years the phrases “uncertainty over healthcare” and “the broken myth of patient safety” have cast a deep shadow on the Japanese public as well as healthcare providers.

Part of the uncertain public feeling about healthcare can be traced to the lack of clarity in the evaluation of healthcare quality. Therefore, it will be important for physicians themselves to assume responsibility for explaining and making visible to the public the true quality of healthcare and increase transparency.

However, evaluation of the quality of healthcare service is not simple. The performance of healthcare is extremely complex and there are a number of important matters such as patient

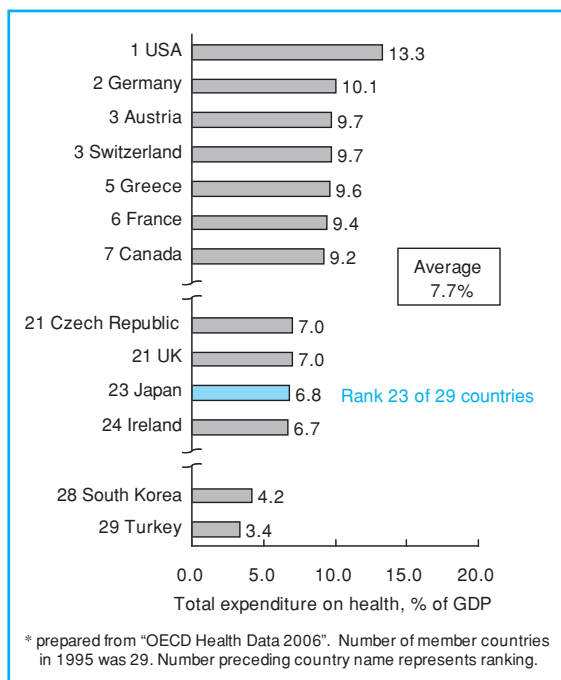


Fig. 1-3-1 Total expenditure on health, % of GDP (1995)

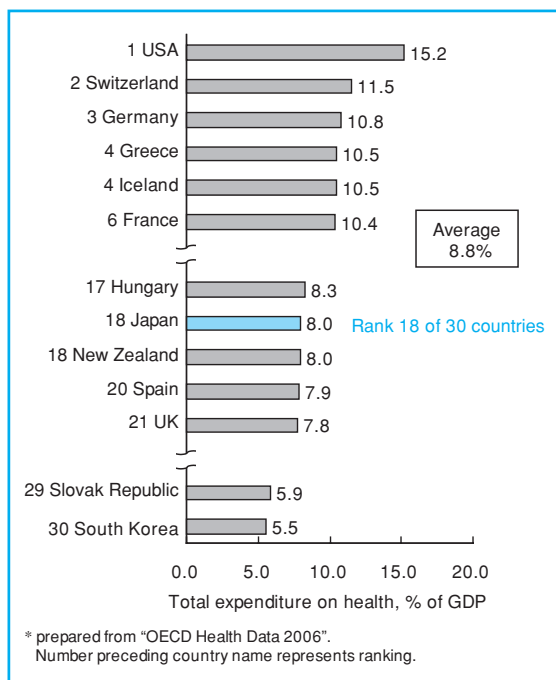


Fig. 1-3-2 Total expenditure on health, % of GDP (2003)

satisfaction degree or issues such as the definition of “quality of life” which make objective evaluation difficult. Because of these problems, there is a tendency to observe only those items which can be easily measured in terms of quantity. The heuristic of availability leads to the danger that evaluation benchmarks might be given priority over the needs of the patient in a clinical environment.

Society changes with the times and each individual’s life continues to change. The public wants quality improvement and not simply greater healthcare efficiency. A flexible system should be designed for evaluating healthcare quality that can cope as times and the social situation changes.

### 3. Economic Power and Healthcare Resources

In this chapter, the healthcare needs of the public and healthcare quality needs have been discussed from the viewpoint of the type of healthcare that

the public wants.

The government is attempting to limit free access to healthcare by reducing the number of hospital beds in order to contain healthcare spending. The question is whether Japan possesses the level of economic power needed to sustain the type of healthcare desired by the public.

This section examines economic power by comparing the standard of the healthcare delivery system and healthcare costs with those of other OECD countries. Based on this discussion, the direction that should be taken in Japan will be considered.

The following is an international comparison of healthcare delivery systems with the “OECD Health Data 2006”<sup>7</sup> which uses 2003 and 2004 data.<sup>8</sup> Currently, there are 30 member countries in the Organization for Economic Co-operation and Development (OECD). Since annual data is lacking for some countries, the comparative measures are based upon a sample of 30 or fewer countries. The minimum and maximum value of the group, the five principal countries (Japan, USA,

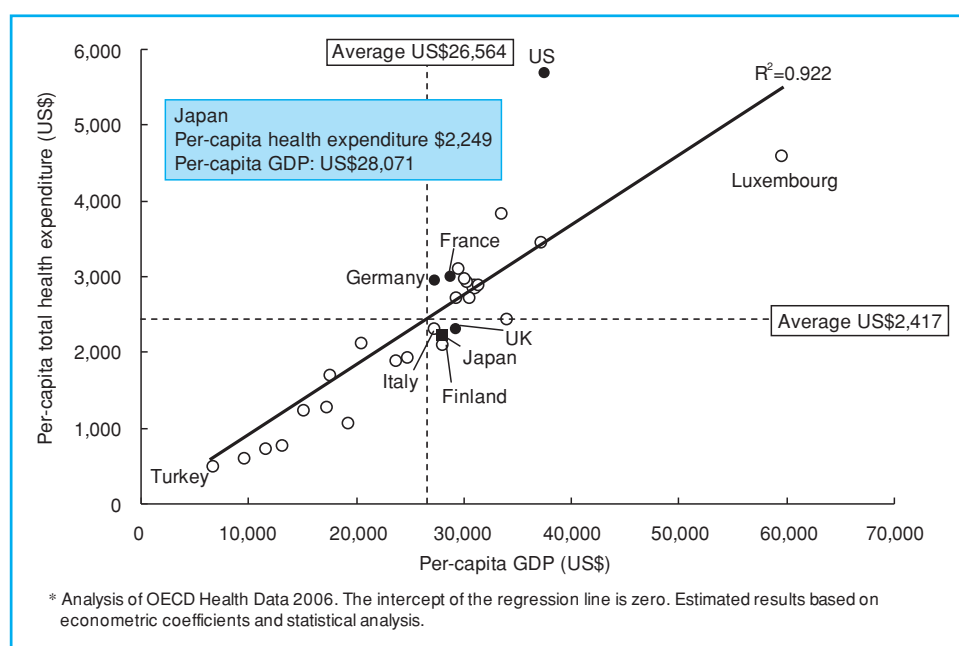
7 Newly revised data made public in October 2006 was used.

8 2003 and 2004 data was analyzed in order to carry out the analysis by adjusting to the year of the most recent data for Japan.

**Table 1-3-1 Comparison of total health expenditure share of GDP for Japan and UK** (%)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Japan	6.8	7.0	6.9	7.2	7.4	7.6	7.8	7.9	8.0	—	—
UK	7.0	7.0	6.8	6.9	7.1	7.3	7.5	7.7	7.8	8.1	8.4

\* Prepared from "OECD Health Data 2006."



**Fig. 1-3-3 Per capita GDP and per capita total healthcare expenditure (2003) (n=30)**

Germany, France, and UK) and other countries are displayed in the scatter diagrams.

The share of the population over 65 years old (hereafter, the "aging rate") is based on the UN World Population Prospects, 2006 Revision (5 year data) of 1995 and 2005. For the share of the population over 65 years old data is from 2005 and the number of physicians (OECD data) is from 2004.

The OECD definition of total expenditure on health indicates that items such as long-term care costs, costs for public health and disease control, and management costs have been included.<sup>9</sup> For this analysis, monetary based data (per capita

GDP, total healthcare expenditure per person, total healthcare expenditure per hospital bed) are compared on purchasing power parity basis converted to U.S. dollars.

### (1) Economic power and healthcare costs

#### 1) Per capita GDP and total healthcare expenditures per capita

Japan's total healthcare expenditure in 1995 was 6.8% of GDP (OECD member country average was 7.7%) and its rank was 23rd among the 29 OECD members. In 2003 the figure was 8.0% (compared with an average of 8.8%) to rank 18th among 30 countries, and Japan did not rise above

<sup>9</sup> Total expenditure on health of the "OECD Health Data 2006" is used. This includes the following costs in addition to those included in the healthcare cost of Japan: Services of curative long-term care, Services of rehabilitative care, Services of long-term nursing care, Ancillary services to healthcare, Medical goods dispensed to outpatients, Services of prevention and public health, and Health Administration and health insurance, Investment (gross capital formation) in health.

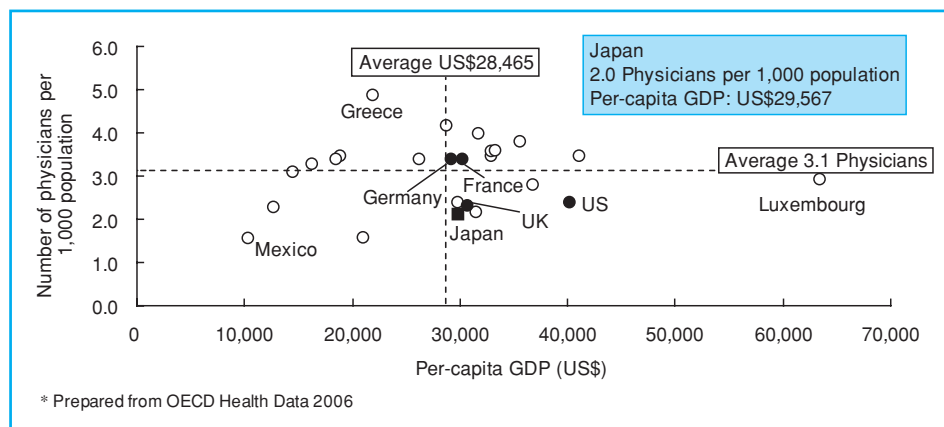


Fig. 1-3-4 Per capita GDP and number of physicians per 1,000 persons (2004) (n=25)

its below-average status (Fig. 1-3-1, Fig. 1-3-2).

Since the inauguration of the Blair Administration in 1997, the UK has steadily expanded total healthcare expenditure as a share of GDP, even while expanding total government expenditures, in an effort to convert from an efficiency-based healthcare policy to a quality-based policy focus. Total healthcare expenditure in the UK as a share of GDP reached 8.4% in 2005 (Table 1-3-1), and comparing the latest similar data, it is outpacing Japan.

Looking at this in international terms, total healthcare expenditure is nearly proportional to GDP per person.

The per capita GDP of Japan in 2003 was US\$28,071, and despite this being above the OECD member average of US\$26,564, the total per capita healthcare expenditure of US\$2,249 was below the comparable average (US\$2,417). Furthermore, among the countries having above average per capita GDP, only four had below average per capita total healthcare expenditure: Japan, the UK, France, and Italy (Fig. 1-3-3).

## 2) Per capita GDP and number of physicians and nursing staff per 1,000 persons

Next we will examine economic power in terms of the relationship between per capita GDP and the number of physicians and nursing staff per 1,000 persons. In Japan, the number of physicians per 1,000 persons was 2.0 physicians (average 3.1) in 2004, the lowest ranking among the group of above average per capita GDP. Currently, this issue of the skewed distribution in physician sup-

ply is being hotly debated. The stark reality of the situation is also brought out when looking at the small absolute number of Japanese physicians in international terms (Fig. 1-3-4).

In 2004, the number of nursing staff per 1,000 persons was 9.0 persons, just slightly above the average of 8.7 persons. In this regard, however, there is danger of a gradual drop below the average supply of practical nurses in the future (Fig. 1-3-5).

## 3) Per capita GDP and total healthcare expenditure per hospital bed

Japan's total healthcare expenditure per hospital bed is US\$ 158,000, which is almost as low as that of a group of much poorer countries in terms of per capita GDP around US\$20,000 (Czech Republic, Hungary, Korea, Mexico, Poland, Portugal, Slovakia, and Turkey). In the group with an above per capita GDP average, Japan has the lowest total healthcare expenditure per hospital bed.

Japan's high total healthcare cost is said to be the result of having many hospital beds, but the largest portion of this cost is not spent on hospital beds. Instead, the large number of hospital beds can be viewed as the outcome of the pursuit of maximum patient welfare with free access to the largest number of beds (Fig. 1-3-6).

## (2) Aging and healthcare delivery system

The aging population in Japan requires more physicians and more resources. While other countries increase resources and the number

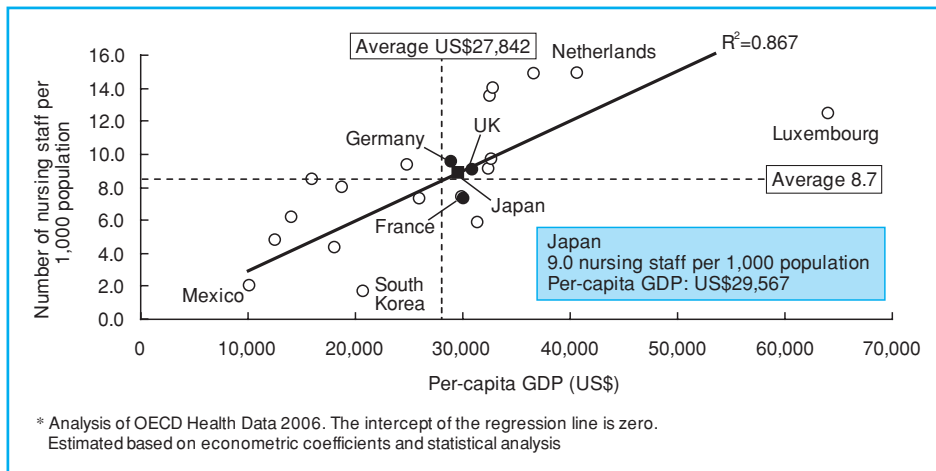


Fig. 1-3-5 Per capita GDP and total nursing staff per 1,000 persons (2004) (n=22)

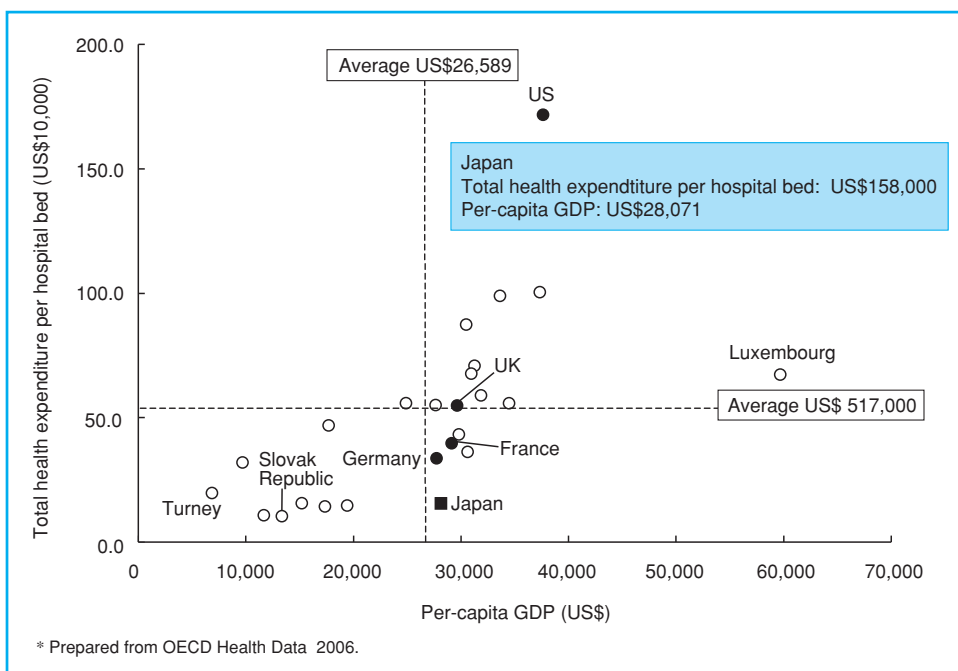


Fig. 1-3-6 Per capita GDP and total healthcare expenditure per hospital bed (n=25)

of physicians as their populations age, current reforms reduce resources and do not increase the number of physicians.

### 1) Aging rate and physicians per 1,000 persons for five major countries

The share of the population over 65 years old rose from 14.6% in 1995 to 19.7% in 2005,<sup>10</sup> a

<sup>10</sup> From the "World Population Prospects the 2006 Revision" (United Nations Population Division). The 1995 and 2005 data are abstracted in order to have 5 year interval data. Consequently, the years for the number of physicians per 1,000 persons (1996 and 2004) and the subsequent data of per hospital bed total healthcare expenditure are incongruent. According to the 2005 National Census, 20.2% of Japan's population was over 65 years old (those uncertain age were assigned proportionally to each age group).

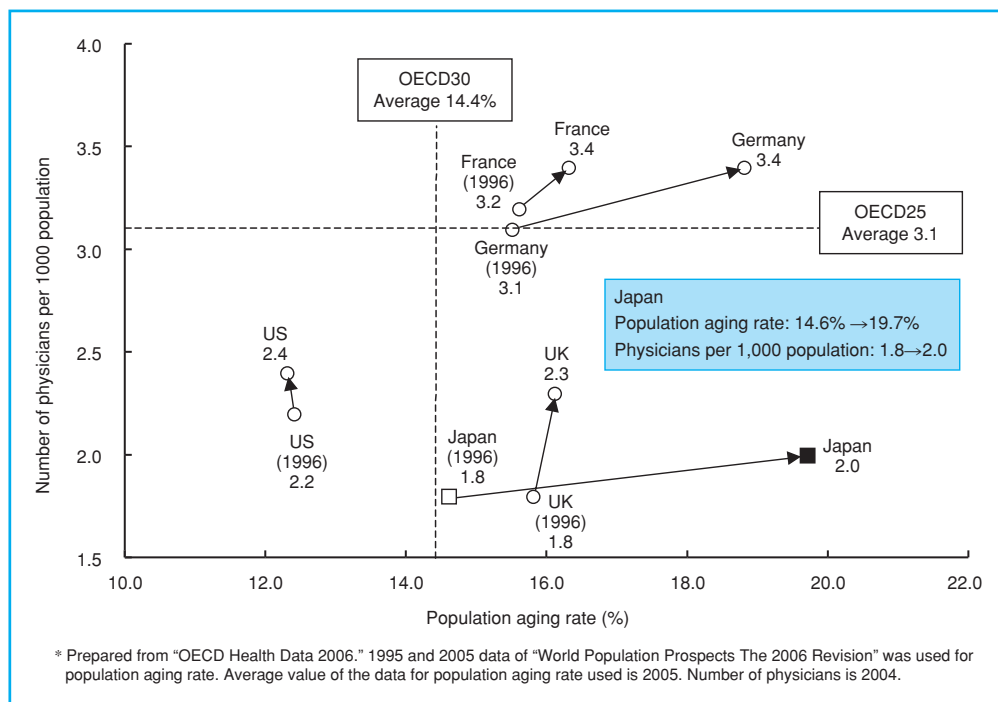


Fig. 1-3-7 Population aging rate of five main countries and number of physicians per 1,000 persons (comparison of 1996 and 2004 numbers)

5.1 point increase. Among the five main countries, the largest increase in the population over 65 years old compared to the previous 10 years were for Germany (15.5% in 1995, 18.8% in 2005) and for France (15.6% in 1995, 16.3% in 2005). (The analysis is performed with the number of physicians from 2004 and the share of the total population over 65 from 2005 since the population data is for every 5 years.)

Germany and France had above-average numbers of physicians per 1,000 persons and further increased with the rise in the share of the population over 65 years old. By contrast, population aging was not seen in the United States and the UK, but the number of physicians per 1,000 persons increased. In contrast to this, the population aged considerably in Japan, but the increase in the per capita number of physicians was limited to only a marginal increase (Fig. 1-3-7). In Japan, the supply of physicians is not being increased to meet the needs of an aging population.

## 2) Aging rate for five main countries and total healthcare expenditure per hospital bed

Population aging is proceeding the fastest in

France and Germany among the five main countries. Accordingly, France has increased total health expenditure per hospital bed together with the development of the population aging. In Germany as well, total healthcare expenditure per hospital bed has increased somewhat.

In Japan, however, total healthcare expenditure per hospital bed increased only slightly from US\$116,000 to US\$158,000 without regard to the striking manner in which the aging of the population advanced (Fig. 1-3-8). Japan has simply not sufficiently prepared the system to respond to the population aging, even in terms of infrastructure (hospital beds).

## (3) What is the future course of Japan's healthcare?

### 1) Appropriate healthcare costs seen from the international viewpoint

A comparison of Japan's healthcare spending and per-capita GDP with that of other OECD nations shows that it should spend much more on healthcare to meet international standards.

For OECD member countries, Japan's ranking in terms of total healthcare expenditure as a

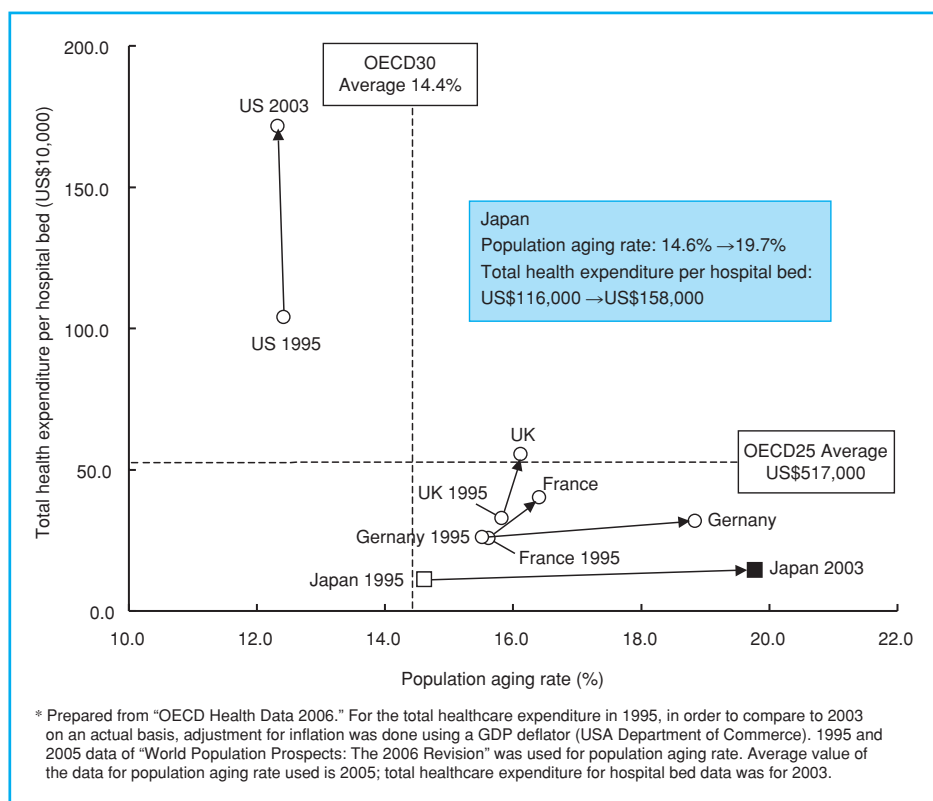


Fig. 1-3-8 Population aging rate of five main countries and total health expenditure per hospital bed (comparison of 1995 and 2003)

proportion of GDP is 23rd among 29 countries in 1995 and 18th among 30 countries in 2003. On the other hand, the per capita GDP of Japan in 2003 was US\$28,071 which is significantly above the OECD average of US\$26,564.

Economic growth is again picking up strongly in Japan. For the fourth quarter of 2006, the growth in Japan's annual nominal GDP was 5.6% year-on-year, and real GDP growth was 5.5% on the same basis (both of these are seasonally adjusted).<sup>11</sup> Even when looking at the trend in GDP in recent years, real GDP clearly indicates a growing trend and the Japanese economy is in a period of real growth.

The following is a trial to calculate what the cost of healthcare in Japan should be based on international standards.

Firstly examined will be per capita GDP (Fig. 1-3-3 as reference). Japan's per capita GDP is US\$28,071 and per capita total healthcare cost is US\$2,249. However, when looking at per capita GDP of Japan on a similar standard, taking the OECD member country level, then the per capita healthcare expenditure should be US\$2,586.<sup>12</sup> To reach the OECD level it is necessary to increase the per capita healthcare expenditure by 15.0% ( $US\$2,586 \div US\$2,249$ ).

Next calculation will be to compare per capita GDP to total healthcare cost (See Fig. 1-3-2). Total healthcare cost in Japan is 8.0% of GDP and the OECD average is 8.8%. The GDP of Japan is US\$3.58 trillion<sup>13</sup> and the total healthcare expenditure is US\$287 billion (8.0% of US\$3.58 trillion<sup>14</sup>). Assuming that Japan's total

11 Cabinet Office "GDP by Quarter October—December 2006" March 12, 2007. (J)

12 (See also Fig. 1-3-3) Data estimated by ordinary least-squares regression: (per capita total healthcare expenditure) =  $0.0921 \times$  (per capita GDP).  $US\$2,586 = 0.0921 \times 28,071$  (rounding variance exists)

13 from "OECD Health Data 2006" the nominal GDP is calculated using the US\$ exchange rate based upon the purchasing power parity.

14 Due to differences in rounding, the result here will not match precisely when calculating from other numbers shown in this document.



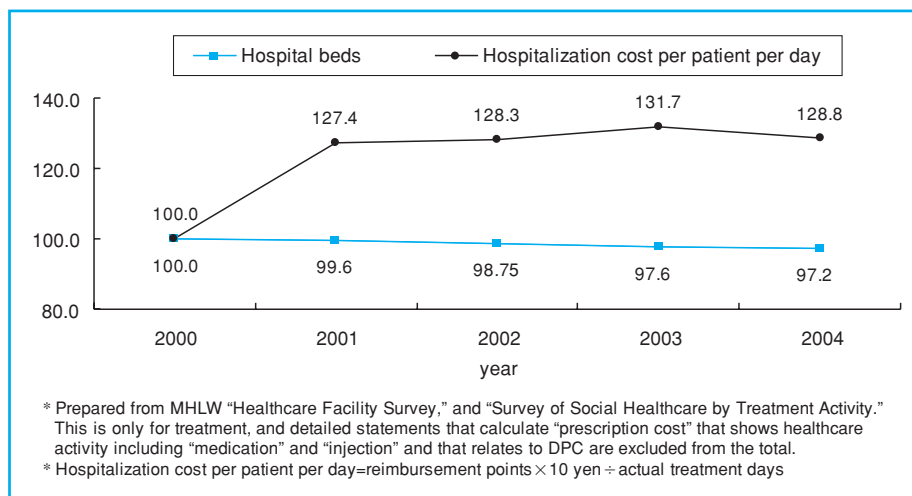


Fig. 1-3-9 Number of hospital beds and hospitalization unit value (hospitalization cost per day per patient)—year 2000=100

healthcare expenditure as a percent of GDP is at the same average level as that of OECD member countries, then total healthcare expenditure should be US\$315 billion (US\$3.58 trillion × 8.8%). Consequently, Japan's total healthcare expenditure should be raised by 9.9% (US\$315 billion ÷ US\$287 billion).

In this manner, no matter which method of calculation is used, it can be concluded that raising healthcare spending by approximately 10–15% is necessary in order to bring Japan's total healthcare costs in line with other advanced nations.

There is also a perception that Japan's large number of hospital beds means that the unit value per hospital bed is low. If the number of hospital beds is reduced, resource inputs can be concentrated, raising the unit value per hospital bed.

However, this is not the reality. In recent years, the trend is toward a reduction of hospital beds in Japan, and from 2002, the horizontal trend in the hospitalization unit value is nearly unchanged (Fig. 1-3-9). In Japan, the number of hospital beds is being reduced in order to contain healthcare costs. As a matter of policy, the reality is that unit

value per hospital bed is not being given a high priority. The view that if the number of hospital beds is reduced, the unit value will increase and the quality of hospital healthcare will rise, is no more than a vague expectation.

## 2) The necessity to increase the number of physicians when viewed in international context

Given the need to increase total healthcare expenditure, it is also necessary to augment the number of physicians. In comparison with other countries, the number of physicians is rather small compared to the economic power of Japan. Naturally, a policy which leaves healthcare costs at the same level and increases the number of physicians would not be desirable from the perspective of maintaining healthcare quality.

In Japan, there are 2.0 physicians per 1,000 persons, and assuming that this was to be raised to the OECD average of 3.1, it would be necessary to increase the number of physicians by 55%. Since the share of physician salary costs in medical practice income (equivalent to healthcare cost) is 14.7%,<sup>15</sup> increasing physician salary costs 55% in proportion to the number of physi-

15 This estimate is based on survey data which shows that in Japanese hospitals, the share of wage costs is 52.3% in medical practice income, of which 28.1% is for physicians' salary (bonus and specified welfare costs are calculated in proportion to salary). Given the ratio of physician salary cost in terms of healthcare practice, the percentage of the physician salary in medical practice cost can be estimated to be 14.7% (52.3% × 28.1%). From the Central Social Insurance Healthcare Association "The 15th Situation Survey of Healthcare Economics (implemented June 2006)." (J)



cians makes it necessary to increase medical practice income by 8.1% ( $0.147 \times 0.550 \times 100(\%)$ ).

In the previous section, when the situation was compared with international standards, it was discussed that it is necessary to increase Japan's total healthcare expenditure by 10–15%. Therefore, an increase of 8.1% in medical practice income is within the scale of this scope. Given the international standard, increasing healthcare spending is of utmost importance.

### Summary

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Japan has achieved the world's highest longevity based on the three pillars of universal health

insurance, free access, and professional autonomy. What is keenly needed for Japan to maintain this success is to improve the system and environment for evaluating and bettering healthcare. To achieve this, mutual understanding of various issues between citizens and physicians is imperative. It should be emphasized that the nation requires not only healthcare efficiency, but—and more importantly—improved healthcare quality. Health policies must secure the appropriate and necessary amount of health funding based on reliable evaluations of healthcare for the sake of both social and national security. The JMA is determined to continue lobbying the government for further improvement of Japan's healthcare from the basic standpoint of “The Patient First.”

# The Japan Medical Association Physicians' Pension Program

JMAJ 50(4): 300–308, 2007

Satoshi IMAMURA\*<sup>1</sup>

## Introduction

The physicians' pension program administered and operated by the Japan Medical Association is the only private pension program that is of physicians, by physicians, and for physicians. For close to 40 years since its inauguration in 1968, this program has undergone steady development and made a substantial contribution to the stability of the livelihoods of physicians in their old age and to the improvement of their welfare. As a result, it has grown into one of the leading private pension programs in Japan, with some 50,000 participants and managing assets of some 570 billion yen (4.7 billion USD) as of September 2006.

This paper seeks to outline the significance of the establishment of the JMA physicians' pensions program, its distinguishing features, and its method of operation.

## Necessity and Significance of Establishment

While emphasis may differ from country to country in public policy and institutions, what is common to all of them is that healthcare services are a component of the fundamental infrastructure of society and are essential for their citizens to lead healthy and rewarding lives.

Physicians are the core providers of healthcare services to citizens, and to assure the stability of their livelihoods, and especially so in their old age, is a policy representing an extremely important social value. That is, improving the welfare of physicians bears directly on improving the welfare of the entire citizenry. This is where a

pension program that protects the livelihoods of physicians in their old age takes on great significance.

Even so, the institutional consideration given to physicians, who play the important social role of providing healthcare services, in the Japanese public and private pension programs system was by no means adequate until the establishment of the physicians' pension program by the JMA.

Japan does, of course, have a public pension plan administered nationally as a first means to support all citizens in their old age. This came about in 1961 in the form of the national social security program, with both universal pension coverage and universal health insurance. The fact is, however, that it is difficult to reckon a public pension alone adequate to provide financial security in old age. To supplement it, therefore, mutual benefit annuities and corporate pensions, administered by companies for their employees, were established as welfare programs provided by companies, and their greater use was encouraged by policies of favorable treatment in the tax and legal systems.

Turning to the occupation of physicians, however, not only do these workers invest long periods in training and research, they also engage in diverse employment patterns, some employed on hospital staffs and some operating clinics in private practice, and quite often moving from one to another in the course of their careers. More than a few physicians were therefore unable to secure sufficient pensions for their future in this system of public pension and various private pensions, enrollments for which no institutional coverage could be maintained. Another major consideration was that reliance on self-provision at an individual level, in addition to the public

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

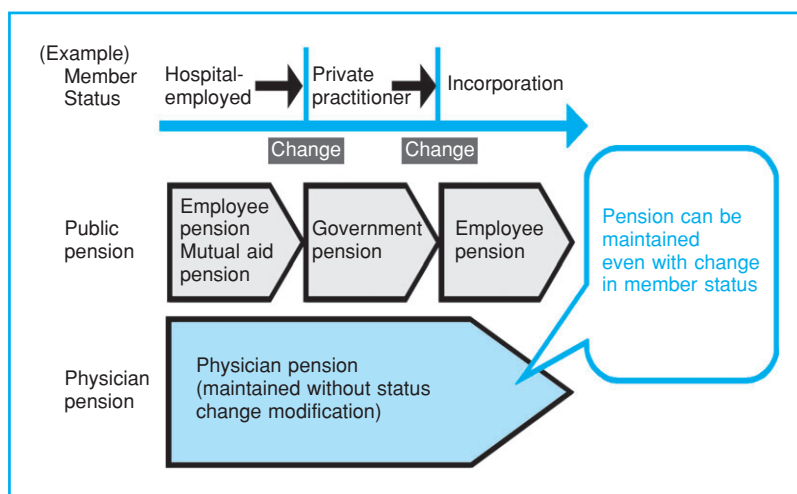


Fig. 1 Pension plan uninterrupted by change in member status

pension, suffered limitations from insufficient security and consistency.

In these circumstances, the need grew for a framework in which all physicians could jointly assist each other to secure reliable livelihoods for their old age and provide sufficient healthcare services to the citizenry. It was thus that the JMA, which is the basis of the physician community and the party responsible for the improvement of their welfare, came to design and administer the physicians' pension program.

It was, however, by no means a simple matter to design a full-fledged pension program on a large scale as a private, voluntary welfare program, and the path to its launch was fraught with difficulty. A simple review of progress towards its inauguration would note that in 1961, when universal pension provision was achieved with the national public pension, a study commission was set up within the JMA to look at voluntary pension programs. This was reconstituted the following year as a preliminary committee for welfare programs, which then spent 7 years and considerable effort on first gaining a basic understanding of pension programs and then surveying and studying similar programs at home and abroad, drafting and revising proposals, negotiating with government agencies such as the Ministry of Finance and the Ministry of Health and Welfare, putting in place an administrative and operational system, and keeping the JMA membership informed, culminating in the inauguration of a voluntary funded pension program

in October 1968. This provided physicians with a means of reliably securing financial resources for their old age without relying on the public pension alone by enrolling in a guaranteed and maintainable pension program that would not be affected by any changes in the course of their careers (Fig. 1).

As the environment in which the program operates has undergone major changes, such as aging of the population and in changes socioeconomic structure, sustaining and developing the pension program, too, has entailed a number of revisions, including an expansion of the benefits and changes in the basic actuarial rate.

### Basic Thinking behind Design and Operation

Appropriate design and disciplined operation and administration are important factors in a pension program. The physicians' pension program, in particular, is a voluntary pension program not bound by law, unlike the public pension and corporate pensions, and thus requires all the more transparency and discipline in design and in operation and administration.

The basic elements of design and of operation and administration of the JMA physicians' pension program are governed by the JMA Physicians' Pension Regulations, which might be considered to be its basic law. The fundamental thinking behind the program is that it is designed so that the JMA gains no benefit whatsoever

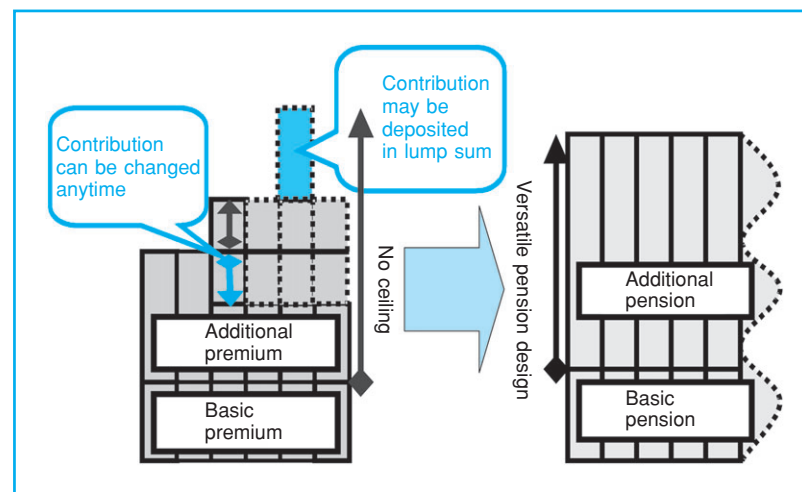


Fig. 2 Flexible setting for addition to basic pension portion

from its operation and administration of the program, and its administrative framework, from the receipt of contributions and disbursement of benefits to maintenance and investment of pension assets, is likewise constructed on the basis of this thinking.

First of all, physician pension contribution and pension resource accounts are handled entirely separately from the JMA's general accounts and other finances. Contributions paid in by enrolled physicians go directly into a special account independent of the general account, and the operating assets are managed strictly separately from the small sum deducted for the administrative expenses towards the JMA's management of the program.

Maintenance of the pension fund is delegated to appropriate third parties (trust companies and life insurers, for example). Pension resources cannot be invested for the benefit of the JMA itself, and it is stipulated that all proceeds and surplus arising from investments are retained in the pension fund and that none whatsoever shall attach materially to the JMA. Further, as long as the JMA performs its operational and administrative tasks appropriately and in accordance with the regulations, it is prohibited for the pension program to incur any other expenses or payment of compensation for any damage suffered by the pension fund.

In other words, other than the performance of appropriate administrative obligations, the pension fund and the JMA have no operational

debtor-creditor relationship whatsoever in terms of financial flows.

Secondly, financial statements are prepared annually in accordance with pension accounting methods describing the financial condition of the pension fund and disclosed to contributors, benefit recipients, and other members of the JMA. The financial year runs from October to September, and the liability reserve, surplus accrued, and other sums and their disposition are determined in the closing of accounts at the end of September each year. Further, the pension program and its financial condition undergo inspection at least once every 5 years in order to assure the soundness and sustainability of the pension program and its appropriate administration, and if necessary, decisions are then made in accordance with the procedures stipulated in the regulations and with the agreement of the enrolled physicians on revision of benefit levels or such experience assumptions as the expected mortality rate and expected rate of return.

### Program Framework, Part 1: Contribution and benefit strengths

This paper first considers the strengths of the physicians' pension program in terms of the framework of its contributions and benefits.

Each contributor to the pension plan has a personal account; it is a funded pension program whose individual contributors receive post-retirement benefits based on the contributions

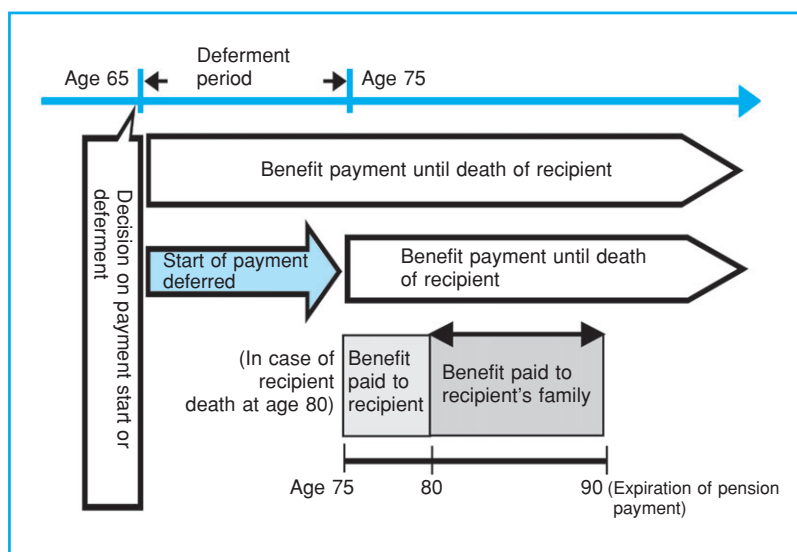


Fig. 3 Start of benefit payment deferrable to age 75

each has paid in and the pension resources that have accumulated from investment income. Because the program is designed, operated, and administered by the JMA, a condition of enrollment in the program is that the enrolled individuals be members of the JMA. Although the enrollment rate at initiation was high, with a majority of members enrolling, this was followed by a relative fall in the enrollment rate as JMA membership underwent considerable growth due to the voluntary nature of enrollment in the program on the basis of the initiative of individual members. For reference, JMA membership currently numbers some 160,000 persons by the most recent count, but a large proportion of the membership is unenrolled, with a total of some 50,000 members making contributions to and receiving benefits from the physicians' pension program. In this respect, the motives for launching the program would seem to call for further promotion of enrollment in it among the membership, and there is indeed much scope to do so.

Turning to the benefit, pension benefits paid comprise a basic portion and an additional portion. Because enrollment is uniform for all JMA members who enroll in the program, the basic pension consists of payment of a fixed-sum contribution (12,000 yen or 100 USD if the contribution is by monthly payment). For its part, the additional pension is positioned as a top-up to the basic pension: contributions towards it

are voluntary, flexibly respondent to the circumstances of the enrolled physician in that there is no upper limit on the amount of this contribution and that the amount may also be raised or lowered while enrolled (Fig. 2).

In principle, pension benefits begin to be paid when the enrollee reaches 65 years of age. However, the program enjoys considerable flexibility with respect to when benefits are paid to enrollees; an enrollee qualified to vest may, for example, delay the initiation of benefit payments until the age of 75 upon request (Fig. 3).

Whereas the basic pension is a whole-life annuity with guaranteed installments, the additional portion is available to pensioners as a whole-life annuity and also as a certain annuity in disbursement periods of 5, 10, or 15 years, and the pensioner may choose whichever of these best suits his or her needs at the time that disbursement is initiated (Fig. 4). Moreover, if certain conditions are satisfied, the program allows for a survivor annuity should a pensioner pass away and also such plans as disability pensions and educational pensions for the education of children.

The rate of return on pension assets, one of the programmatic experience assumptions, is currently defined as 1.5%, and the amount of future pension benefits, whose underlying assets are the contributions, is calculated for payment on the basis of this rate of return. While this may

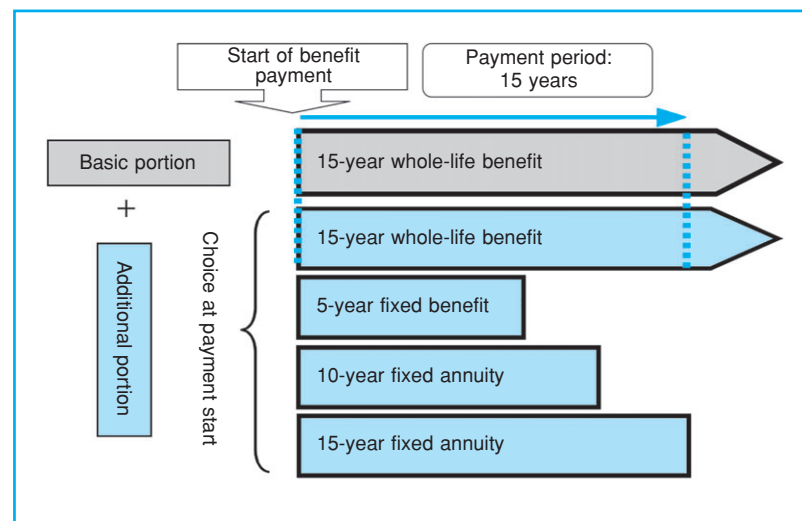


Fig. 4 Pension payment scheme chosen at benefit payment

be considered a sort of guaranteed rate of return, it is not permanently fixed. Retrospectively, it was 5.5% for a long period after the 1968 launch, but due to the extensive deterioration of the investment environment since 1990 as seen in such factors as the long slump of the Japanese economy resulting from the collapse of the bubble, extraordinarily low interest rates resulting from the central bank's zero-interest-rate policy and the downward spiral of the stock market, it is now 1.5% following two unavoidable cuts in 1998 and 2003, with the agreement of enrollees, made for the further maintenance and development of the program. Even so, the program operates with a rate of return that is considerably favorable relative to other similar products in a Japan that continues to suffer extraordinarily low interest rates that are unprecedented in world history and where banks offer deposit interest rates of less than 0.5%.

To review briefly the state of contributions and benefits, few have enrolled for the basic pension alone, and the average monthly contribution of enrollees is around 68,000 yen (560 USD). Of those already receiving benefits, some 90% receive the additional top-up to the basic pension, and the average monthly pension of last year's new pensioners reached some 180,000 yen (1,500 USD).

If this physicians' pension is added to the public pension benefit, which is currently 66,000 yen (550 USD) per person, a pensioner who

qualifies for the full basic pension and enjoys income from savings and other financial assets built up while active in the workforce will have an income considerably higher than the average income across retired Japanese households as a whole, contributing significantly to the stable livelihoods and improved welfare of the physicians themselves in their old age, of course, and also to the stable provision of healthcare services to the citizenry. Incidentally, the cost of living required by a retired household of two persons aged 65 or older in Japan is considered to be about 250,000 yen (2,080 USD) monthly, according to the Japan Institute of Life Insurance.

Turning to the distribution of enrollees across age groups, enrollees in their 40s and 50s account for the bulk of all enrollees at just over 70%, and the young generation of enrollees in their 20s and 30s unfortunately make up only around 5%. Although interest in pensions and their retirement livelihoods in the distant future remains stubbornly low among the young generation and it tends to be difficult to enroll them in the program, we are aware of the need for more information and publicity among this generation of physicians.

### **Program Framework, Part 2: Investment and management strengths**

The paper next turns to the approach to investment of the pension fund and its strengths.



A funded pension such as the JMA's physicians' pension program must pay out pension benefits in future with certainty, with its underlying assets as the contributions paid in to date. Pension resources should therefore be invested to continuously return earnings that are as high as possible. This does not, however, justify making investments that are too risky. It is necessary to consider an appropriate balance of investment risk and return, perform adequate risk management, and achieve efficient investment.

In concrete terms, this entails both ascertaining the structure of the liability side, including the liability reserve and income and expenditure flows into the future, and identifying the allowable risk and required return, as well as on the asset side analyzing the characteristics of stocks, bonds, and other domestic and overseas investment instruments to determine basic asset allocation and other aspects of the structure of investment considered to be optimal over the medium and long term. One then defines a basic investment policy, draws up guidelines, and conducts disciplined investment in accordance with these. Further, one continuously monitors risk and the status of investments for any changes in the environment of the pension program and, when necessary, examines revisions to improve the investment structure.

This describes the basic managerial and administrative processes in pension investment, and the physicians' pension program makes and manages investments accordingly. In global financial markets that are growing more sophisticated and diverse, it is difficult for managers who are not necessarily investment experts to invest underlying pension assets smoothly and efficiently on their own. We therefore commission domestic and overseas investment institutions that are investment experts to make the actual investments as a way to pursue the investment results reckoned to be optimal for the pension program.

In order to achieve an investment structure considered to be optimal for the current physicians' pension program, in 2005, we conducted a review of the investment structure with the support of a global pension consulting firm. We defined investment techniques and basic proportions allocated to domestic and overseas stocks and bonds on the basis of outstanding investment theory and pension investment decision-making

processes recognized in the world of asset management and selected 10-plus investment firms considered, among many domestic and overseas investment institutions, to have the greatest investment capability to charge them with making investments in the fields and using the techniques in which each of them is most proficient. We have currently defined the target return on investment as being around 4%.

A significant advantage of the program's investment is that it enhances the profitability of investments, compared with fund management performed by individuals to secure their retirement funds.

Since the program is administered by the JMA, which is a public-interest corporation and not a profit-seeking business of the JMA itself, the tax-exempt treatment of its reserves, interest income, stock dividends, capital gains, and all other investment income is accepted by the tax authorities.

Administrative expenses deducted from contributions in the physicians' pension program are no more than 100 yen per contribution paid in, regardless of the size of that contribution, and no other management and administration costs are paid in the course of investing the funds.

Funds may be managed at extremely low cost, in terms of service charges paid to financial institutions and return rates when a giant investor such as the physicians' pension program commissions investment with an investment institution, compared to when an individual manages the funds by purchasing shares or the financial products of, for example, an investment trust. Advantages of scale may also be exploited to enjoy portfolio management that benefits from the sophisticated and diverse investment techniques of the world's leading investment institutions that it would be difficult for an individual to devise.

With regard to management of the actual status of investments, we receive investment performance reports from the investment institutions commissioned to make investments on a monthly basis, and the section of pension program of the JMA that oversees the pension program conducts hearings on investment particulars on a quarterly basis, as a rule of thumb, and reports on them to the executive for pensions. Moreover, the Pension Committee, which is the substantive decision-making body for the pension

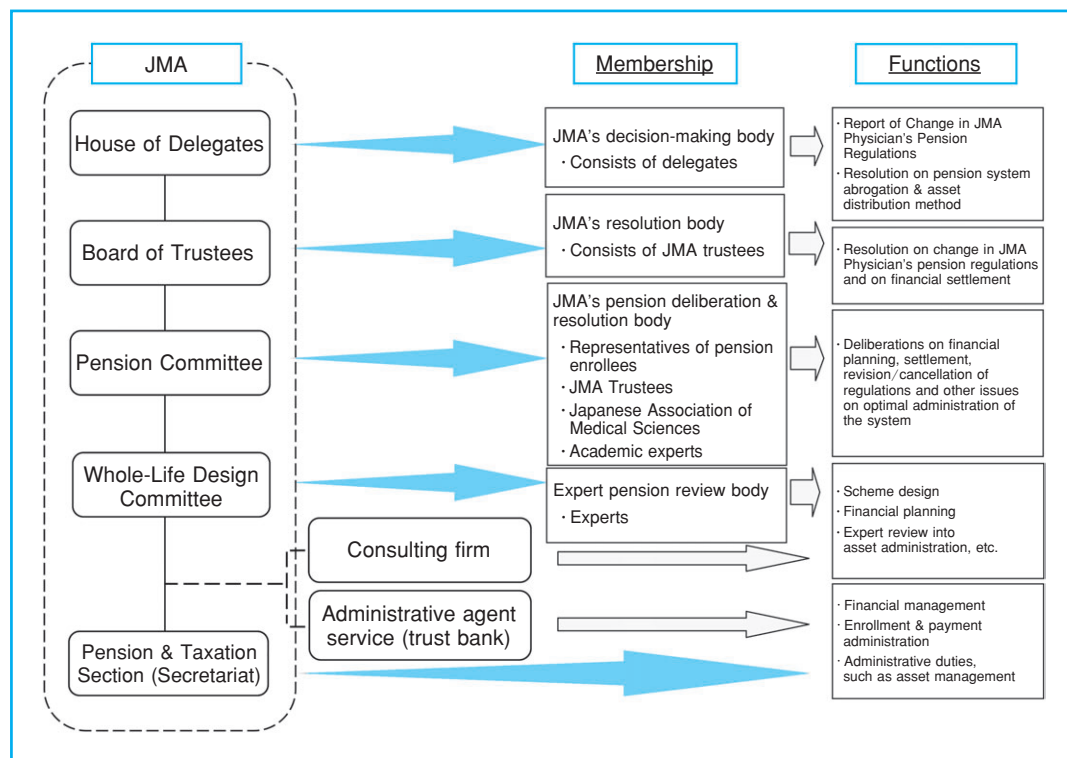


Fig. 5 JMA's administrative and decision-making systems for pension plan

program, and an expert committee composed of experts in the management and investment of pension assets suitably review the status of investments, analyze problems, and, if necessary, reconsider the investment institutions commissioned and examine such matters as expansion of investment instruments to improve the investment structure and investment outcomes of the pension program.

Custody of underlying pension assets is enjoined to an investment institution of extraordinary creditworthiness, and the greater part of the pension fund is segregated securely as trust assets in a framework in which the pension's underlying assets would not waste away if the investment institution were to collapse.

### JMA's Administrative and Decision-Making Systems for Pension Plan

This section describes the JMA's responsible section that actually manages and administers the physicians' pension program and the decision-making system (Fig. 5).

The supreme decision-making body of the JMA is the House of Delegates, and it receives reports on matters of importance regarding the pension program itself, such as amendment of the pension regulations. Dissolution of the pension program itself requires a resolution of the House of Delegates.

The ultimate decision-making body in routine operation of the pension program is stated in the regulations as being the Board of Trustees of the JMA and its president, and one executive board member is appointed to oversee administration of the pension program. The president disposes of matters of importance concerning the administration of the pension program (e.g., amendment of the pension regulations and financial statements) at the decision of the Board of Trustees, and the executive board member in charge directs and performs day-to-day administration of the pension program.

The Pension Committee has further been established as a special decision-making body for the pension program with the objective of guiding appropriate administration of the pen-



sion program. The role of this committee is to deliberate on matters of importance in administration of the pension program and report its findings to the president. It is stipulated that the president and the Board of Trustees will respect the determinations of the Pension Committee, and the actual power of decision in routine administration may be said to lie with the Pension Committee. As well as the JMA executive board member responsible for the pension and several academic experts, the committee additionally comprises a number of enrollee delegates, who make up about half of its members, so that the interests of its enrollees will be reflected in the administration of the pension program.

Assisting these decision-making bodies is an expert committee composed of experts with extensive experience in such fields as pension accounting, pension management, and pension program analysis. This committee studies questions in advance of their deliberation by the Pension Committee and also plays a substantive steering function regarding the direction of the administration of the pension program, analyzing sophisticated and specialized issues of finance and administration that the Pension Committee is unable to deliberate adequately and examining and drafting proposals on revisions to the pension program.

A dedicated managerial section has been established within the JMA secretariat to handle the day-to-day management and clerical duties associated with the pension program. This section is responsible for all office business concerning administration of the pension program, including matters concerning contributors and beneficiaries, enrollment promotion campaigns, management of the investment of pension assets, financial reports, and information disclosure. Specialized pension accounting, receipt of contributions from enrollees, disbursement of benefits to beneficiaries, and other such operations are performed by a trust bank designated as a book runner.

## Conclusion

This paper has described in outline the physicians' pension program in its entirety. In closing, we would like to revisit the significance and advantages of the pension program and touch briefly on some of the issues facing it.

As stated at the outset, this physicians' pension

program is the only voluntary pension program constructed on the platform of joint and mutual aid through a physicians' group. Having the direct purpose of improving the welfare of physicians themselves and ensuring stability of their livelihoods in old age, it is of tremendous significance in thus achieving the stable provision of medical services and contributing to the improved welfare of the entire citizenry.

By enrolling in a sustainable pension program not affected by changes in their career paths, physicians are able to ensure themselves substantial retirement funds with reliability and thus derive significant advantage from the structure of this pension program. Contribution payment methods and benefit disbursement methods are designed to be flexible and may be arranged to meet the diverse needs of enrollees.

Because it is administered by the public-interest corporation JMA and is not a profit-seeking business of the JMA itself, the investment income the pension program generates is tax exempt, and it is able to enjoy the investment outcomes of top-rate domestic and overseas investment institutions at a cost much lower than individual investment would incur. Administrative expenses are also kept low.

In addition to being of great social significance and considerable merit, a pension program such as this one has a massive presence in terms of enrollee numbers and asset volume that compares favorably with the corporate pension programs of such leading Japanese companies as Toyota and Hitachi.

This means, to put it another way, that the physicians' pension program is charged with an immense social responsibility. In carrying out this social responsibility, it is necessary to overcome issues in administration of the pension program and work to further improve the soundness and efficiency of the program.

For example, not only is enrollment in the program considered low, but it is necessary to improve the ongoing aging of enrollees and the beneficiary composition. We must conduct publicity and enrollment campaigns, promote enrollment among the younger generation and hospital-employed physicians in particular, and stabilize the program further.

Operationally, we must respond appropriately to financial markets of growing sophistication and diversity and enhance investment efficiency

further. We are currently experiencing a temporary insufficiency of funds in the program due to such factors as the deterioration of the investment environment in Japan after the collapse of the bubble economy, and our goal is to eliminate this insufficiency.

We must also pay close attention to changes in government policy and the legal system that would affect the pension program and, as necessary, take steps to maintain and develop the program.

Our commitment to resolving these issues and to developing the physicians' pension program

far into the future also connects to fulfillment of the social responsibility of the JMA itself for the welfare of the physicians of Japan and the provision of medical services to the citizenry. We will be untiring in our efforts in the continued administration of this pension program.

#### **Acknowledgements**

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The author appreciates the assistance provided by Mr. Tsunehiro Fukuhara, Manager, and Mr. Masao Ishio, Assistant Manager of the Department of Pension and Taxation of the Japan Medical Association in completing this paper.

Lecture 1

# The Performance of Japan's Health System Analysis with the Harvard-Flagship Health Reform Approach<sup>\*1</sup>

JMAJ 50(4): 309–316, 2007

Michael R. REICH<sup>\*2</sup>

## What Is the Harvard-Flagship Health Reform Approach?

Today, I will give a brief presentation on the question: “How can we think about the performance of a health system?”

The following two points should be kept in mind when thinking about a health system. First, a health system is a means to an end, not an end in itself. In other words, a health system is intended to achieve several purposes. The second point is that a health system is complex because it involves many actors who need to work together (Slide 1).

As is well known, analyzing the performance of a health system is very difficult. There is no international consensus for the evaluation parameters that should be used. To help address this problem, four professors at the Harvard School of Public Health have collaborated to develop the “Harvard-Flagship Health Reform Approach” (referred to below as the Harvard-Flagship Approach), in collaboration with the World Bank Institute (Slides 2, 3).<sup>\*3</sup>

The Harvard-Flagship Approach evaluates three items, “Health Status,” “Customer Satisfaction,” and “Financial Risk Protection” as the ultimate performance goals of a health system, from technical, ethical and political points of view (Slides 4, 5).

In this approach, we propose that five elements, Financing, Payment, Organization, Regulation and Behavior (of patients, physicians, input producers, etc.), be used as *control knobs* to bring about improved performance. Three factors, Efficiency, Quality and Access are used as *intermediate performance measures* related to them.

One example of another approach for evaluating health systems is the World Health Organization (WHO) approach. This uses three items, “Health Status,” “Responsiveness” and “Fairness in Financial Contribution,” as indices for assessment. These are similar to three final performance measures of the Harvard-Flagship Approach, but the Harvard-Flagship Approach differs in providing methods and policies for attaining the performance goals (Slide 6).

## The Japanese Health System: What are its strengths?

In analyzing the Japanese health system with the Harvard-Flagship Approach, let us look first at health status. According to the 2005 statistics of the Organization of Economic Cooperation and Development (OECD), Japan has the longest average life expectancy, and its infant mortality rate is also the lowest. According to WHO's *World Health Report 2000*, Japan's health status is the best in the world and can be considered excellent (Slides 7–10).

<sup>\*1</sup> This article is based on a presentation made originally in Japanese at the Japan Medical Association Research Institute 10th Anniversary Public Lecture hosted by the Japan Medical Association at the JMA Hall on April 13, 2007.

<sup>\*2</sup> Professor, Harvard School of Public Health, Boston, USA (reich@hsph.harvard.edu).

<sup>\*3</sup> The collaboration resulted in the course taught around the world jointly by the Harvard School of Public Health and the World Bank Institute, under the name “Flagship Course on Health Sector Reform and Sustainable Financing” and in the book, *Getting Health Reform Right: A Guide to Improving Performance and Equity* (by Marc J. Roberts, William Hsiao, Peter Berman, and Michael R. Reich, published by Oxford University Press, 2004).

Also from the perspective of financial risk protection, Japan's health system can be considered very good, much higher than the United States, for example, due to its universal coverage, free access to hospitals and clinics, comprehensive benefit, and its catastrophic coverage (for high-cost medical care) (Slides 11, 12).

### **The Japanese Health System: What are its challenges?**

One of the major challenges for the Japanese health system is related to health expenditure. According to OECD's 2005 data, Japan's figure for health expenditure as a portion of gross domestic product (ratio to GDP) is approximately half that of the U.S., which is the highest, and about as low as that of the U.K., which is the lowest among the OECD countries. Japan's per capita expenditure is also the lowest. However, due to the fact that since the beginning of the 1980s, the population structure has been rapidly aging, and national medical expenditure has also been increasing, Japan is facing challenges for future spending (Slides 13–15).

Japan also confronts challenges related to customer satisfaction. The results vary according to different surveys (from 19% to 82.4%), but its ranking among the major developed countries is quite low; therefore, we could say that Japan's health system ranks "fair to poor" on customer satisfaction. The reasons for this low rating could be the limited explanation and transparency in doctor-patient relations, and the lack of access to high-technology health services (Slides 16, 17).

### **What Can Be Done?**

As mentioned above, one characteristic of the Harvard-Flagship Approach is that it proposes specific methods for designing and introducing solutions.

Let me briefly mention two such methods. First, the approach uses adjustments of the five control knobs in order to improve performance and equity. Second, the approach uses a diagnostic tree to move from problems to interventions using the control knobs.

Now, let us briefly examine two examples: Low Public Satisfaction and Growing Chronic Diseases. Please note these are only partial analyses for illustrative purposes (Slide 18).

First, one needs to construct a diagnostic tree for Low Public Satisfaction. Inadequate quality, limited access to high-tech services, and rising costs are all factors that contribute to the low rating on public satisfaction. Japan's aging population is an important factor that contributes to the rising medical costs. All of these causes are affected by the five control knobs (financing, payment, organization, regulation, and behavior) (Slide 19).

In the case of adjusting the financing control knob to improve public satisfaction, one specific example that could be proposed is to consider partial introduction of private health insurance in Japan. As a result, one could anticipate the following consequences: (1) greater choice on procedures, (2) better quality for patients, and (3) better satisfaction for patients. However, from the ethical point of view, one must also be concerned about possible equity effects and the political role of private insurers. By introducing private health insurance, the political balance could change. For example, the private insurance industry in the U.S. exerts huge political influence over domestic health policy decisions (Slides 20, 21).

For the next example, one begins again by constructing a diagnostic tree for Growing Chronic Diseases. Inadequate exercise, changing nutrition, and changing family structure are all factors that contribute to the increase of chronic diseases in Japan. Aging again is an important factor in the changing family structure. All of these causes are affected by the five control knobs (financing, payment, organization, regulation, and behavior) (Slide 22).

Here, let us consider how adjustments of the Behavior control knob could affect chronic diseases in Japan. We mentioned that many chronic disease problems in Japan (and elsewhere) are related to two behavior changes: individual nutritional consumption, and individual habits of physical exercise (Slides 23, 24).

Recently, in Japan, two Vice Ministers of the Ministry of Health, Labor, and Welfare began a public diet. This is a specific example of adjusting the behavior control knob. One of the Vice Ministers, Professor Keizo Takemi, succeeded in losing 4 kg in 4 months, demonstrating a successful change in his personal health status and also raising the issue of personal behavior as a matter of public debate. However, it will not be easy

to expand his personal success to change the behavior of other people in Japan (Slide 25). This will require more efforts, including the possible use of other control knobs to affect Japan's health system performance.

### **The Harvard-Flagship Approach as a Tool for Health Reform in Japan**

I would like to suggest three conclusions from this brief presentation. First, health reform is not easy. It is a complex process that involves technical, ethical, and political decisions. For Japan, we must think about who and how this process can be made to work effectively (Slide 26).

Second, my presentation suggests that the Harvard-Flagship Approach of five control knobs can help guide analysis and decisions about health reform in Japan. The Harvard-Flagship

Approach is effective for systematically organizing ideas about health system reform, such as which of the three performance goals should be prioritized and what kind of society one hopes to create. The approach can also be used to help structure public debate and deliberation about these critical decisions for Japan's future health system (Slide 27).

Third, my presentation suggests that health reform at the individual level may not be easy—but that it is possible. This can be seen in Professor Takemi's example of remarkable success in becoming more healthy (Slide 28). His example provides an inspiration for all of us and for Japan.

### **Acknowledgements**

The author appreciates the assistance provided by Mr. Satoshi Ezoe of Harvard University and by Professor Keizo Takemi and the Japan Medical Association.

(Slide 1)

### **What is a Health System?**

A Health System is complex and includes many different actors, such as:

- Treatment providers – individuals and institutions
- Preventive service providers
- Financial intermediaries
- Input producers
- Planners, administrators, and regulators
- Other actors producing system outcomes

A Health System is a means to an end, not an end in itself.

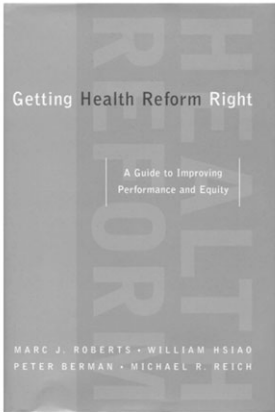
(Slide 2)

### **How do you Measure Performance?**

- Many different approaches to measuring the performance of a health system.
- No international consensus has developed on the parameters
- Harvard School of Public Health professors developed a method in collaboration with the World Bank Institute

(Slide 3)

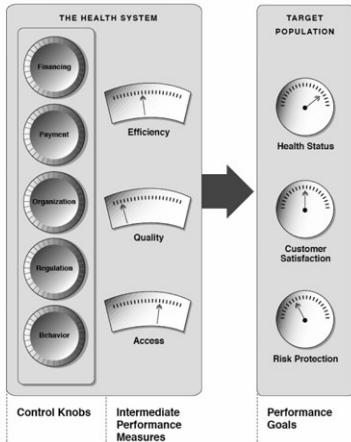
## The Harvard-Flagship Health Reform Approach



From: Marc Roberts, William Hsiao, Peter Berman, and Michael R. Reich: *Getting Health Reform Right: A Guide to Improving Performance and Equity*. Oxford University Press, New York, 2004.

(Slide 4)

## The Harvard-Flagship Health Reform Approach



From: Marc Roberts, William Hsiao, Peter Berman, and Michael R. Reich: *Getting Health Reform Right: A Guide to Improving Performance and Equity*. Oxford University Press, New York, 2004, p. 27

(Slide 5)

## The Harvard-Flagship Health Reform Approach

Decisions to Reform the Health System

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Depend on a combination of:

- Technical Analysis
- Ethical Analysis
- Political Analysis

From: Marc Roberts, William Hsiao, Peter Berman, and Michael R. Reich: *Getting Health Reform Right: A Guide to Improving Performance and Equity*. Oxford University Press, New York, 2004, p. 27

(Slide 6)

Harvard-Flagship Approach		WHO Approach
The Health System	Target Population	
Financing	<b>Efficiency</b>	Health Status
Payment		Public Satisfaction
Organization		Risk Protection
Regulation	<b>Access</b>	Health Status
Behavior		Fairness in Financial Contribution
<b>Control Knobs</b>	<b>Intermediate Performance Measures</b>	<b>Performance Goals</b>

(Slide 7)

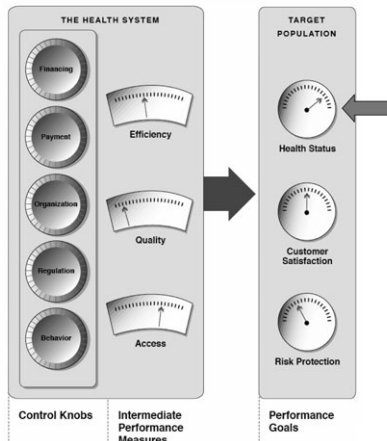
## Applying the Harvard-Flagship Approach to Japan

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- What can we say about the performance of the Japanese health system?
- What can we learn about opportunities for health reform?
- Let's look at each of the three performance goals.

(Slide 8)

First, let's look at health status as a goal of the health system





(Slide 9)

### Final Goal 1 : Health Status: Excellent

	Japan	Canada	UK	Germany	US
Life Expectancy (2003)	81.8	79.7	78.5	78.4	77.2
Infant Mortality Rate (2003)	3.0	5.4	5.3	4.2	7.0

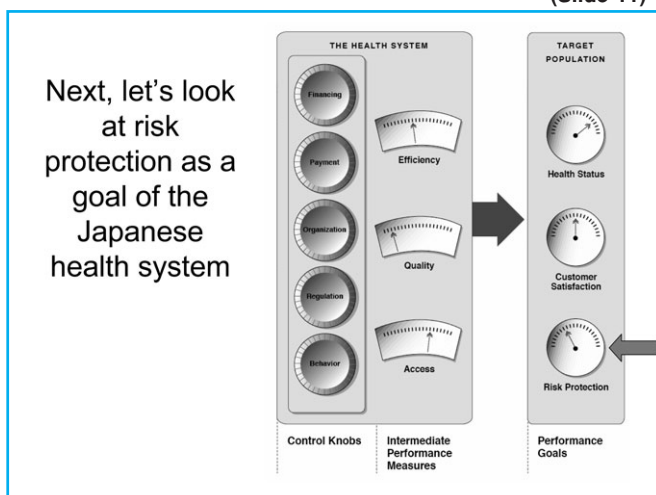
(OECD 2005)

(Slide 10)

### WHO The World Health Report 2000

	Attainment of Goals						Performance	
	Overall goal attainment	Health Level (DALE)	Health Distribution	Responsiveness Level	Responsiveness Distribution	Fairness in financial contribution	On level of health	Overall health system performance
Japan	1	1	3	6	3-38	8-11	9	10
France	6	3	12	16-17	3-38	26-29	4	1
Canada	7	12	18	7-8	3-38	17-19	35	30
UK	9	14	2	26-27	3-38	8-11	24	18
Italy	11	6	14	22-23	3-38	45-47	3	2
Australia	12	2	17	12-13	3-38	26-29	39	32
Germany	14	22	20	5	3-38	6-7	41	25
US	15	24	32	1	3-38	54-55	72	37

(Slide 11)



(Slide 12)

- ### Final Goal 2 : Risk Protection: Very Good
- Universal Coverage: **100% mandatory enrollment**
  - Free access: **No barrier for any hospitals or clinics**
  - Comprehensive Benefit: **Inpatient, Outpatient, Drugs & Devices**
  - Catastrophic coverage: **30% Co-payment but ceiling of \$700/month**

(Slide 13)

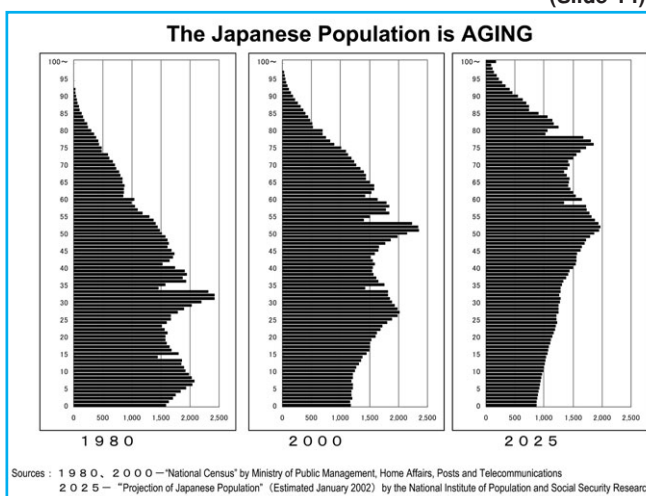
### TOTAL HEALTH EXPENDITURE (2003)

	US	GERMANY	CANADA	JAPAN	UK
% of GDP	15.0	11.1	9.9	7.9	7.7
Per capita (ppp)	\$5,635	\$2,996	\$3,001	\$2,139	\$2,231

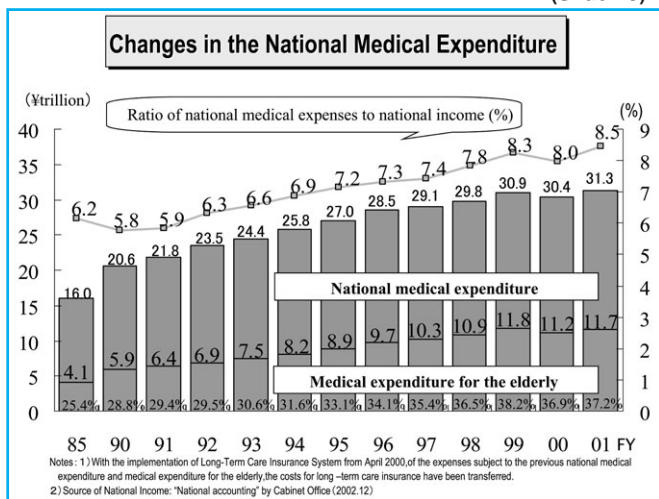
(OECD 2005)

BUT THE FUTURE IS UNCERTAIN BECAUSE.....

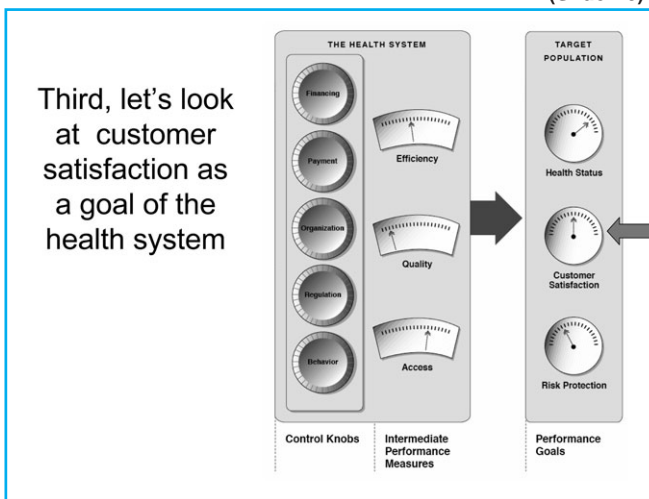
(Slide 14)



(Slide 15)



(Slide 16)



(Slide 17)

### Final Goal 3: Public Satisfaction: Fair to Poor

- Least satisfied among developed countries\*1
- Satisfaction rate varies by surveys 19%\*2 - 82.4%\*3
- Major complaints: **Lack of explanation & transparency**

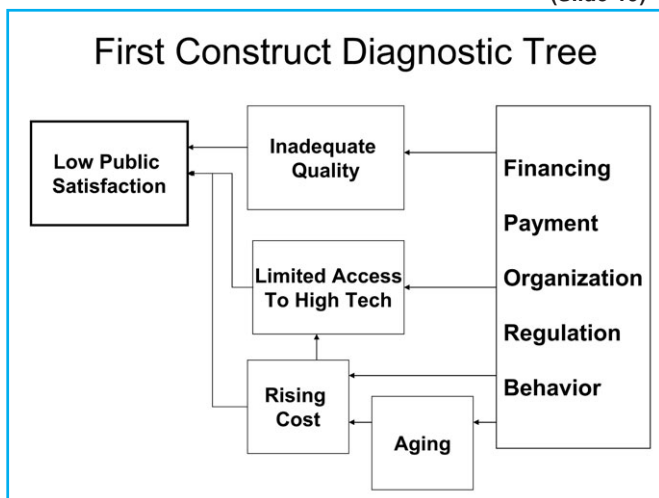
\*1McKinsey 2000 \*2JMA 2004 \*3Nikkei 2002

(Slide 18)

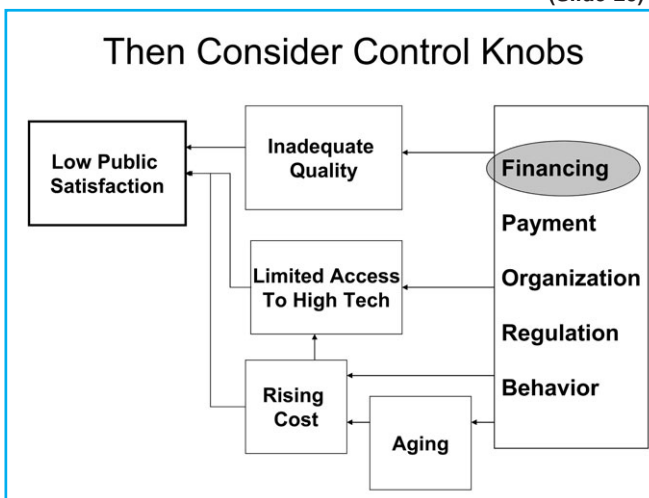
### What Can Be Done?

- Decisions about health reform require adjustments to one or more control knobs to improve performance
- The Harvard-Flagship Health Reform Approach uses diagnostic trees to move from problems to interventions using the control knobs
- Briefly we show two examples: for public satisfaction, and for chronic disease

(Slide 19)



(Slide 20)





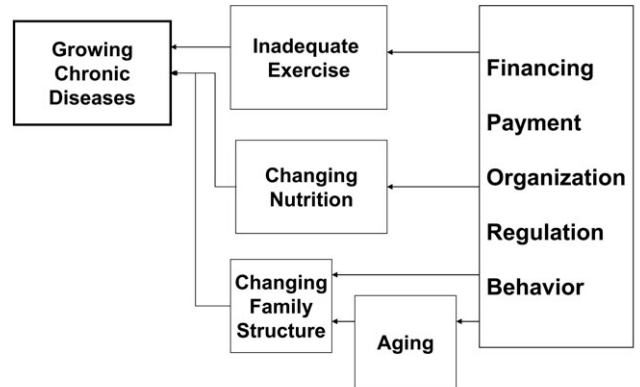
(Slide 21)

### Financing Control Knob

- Consider partial introduction of private health insurance in Japan, to give:
  - Greater choice on procedures
  - Better quality for patients
  - Better satisfaction for patients
  - BUT be careful for equity effects and political role of private insurers

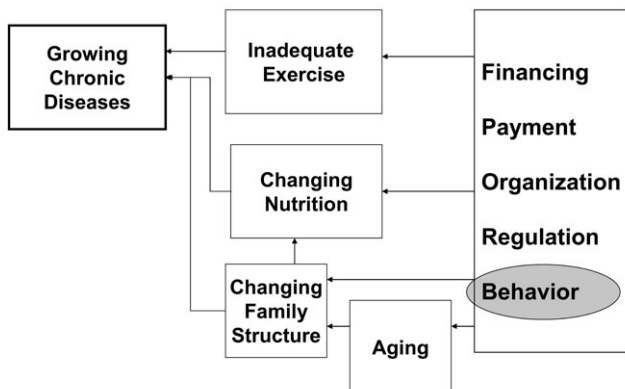
(Slide 22)

### First Construct Diagnostic Tree



(Slide 23)

### Then Consider Control Knobs



(Slide 24)

### Behavior Control Knob

- Many chronic disease problems in Japan (and elsewhere) are related to behavior change, including:
  - Changing individual nutritional consumption
  - Changing individual habits of physical exercise

(Slide 25)

### Behavior Control Knob

- Japanese Diet members go on Public Diet



- Not so easy to change behavior

(Slide 26)

### Conclusion #1

- Health reform is a complex process that involves technical, ethical, and political decisions.

(Slide 27)

*Conclusion #2*

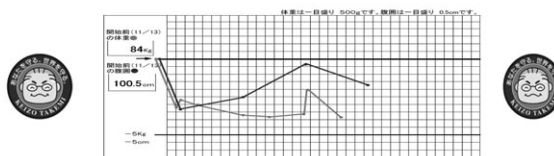
- **The Harvard-Flagship Health Reform Approach of five control knobs can help guide decisions about health reform in Japan.**

(Slide 28)

*Conclusion #3*

- **Health re-form, even for the individual form, is not easy – but it is possible.**

武見副大臣 体重・腹囲の変化記録



Lecture 2

## Aiming for a Society in Which Everyone Can Enjoy a Healthy Life<sup>\*1</sup>

JMAJ 50(4): 317–320, 2007

Keizo TAKEMI<sup>\*2</sup>

### Health Checkups for Specific Diseases, Achieved by Taking into Consideration Preventive Medicine

My name is Keizo Takemi; I am a member of the House of Councillors, presently appointed as Vice-Minister of the Ministry of Health, Labor, and Welfare.

You have all heard the talk by Professor Reich, and you have probably noticed that there is a difference in the meaning of the word “healthcare” used in Japanese and English.

When healthcare policy is discussed in English, in most cases it incorporates the meaning of “health reform,” which has a broader meaning than “medical reform.” That is, in the United States, in addition to “disease treatment,” preventive medicine is taken into consideration.

Therefore, when we discuss Japanese healthcare policies using the Harvard Approach, I think we should add “prevention” to the three intermediate performance measures “access,” “quality” and “efficiency.” This is because Japan is approaching an era when it will be necessary to consider the healthcare system more comprehensively, including “prevention.”

In fact, as Slide 2 shows, health promotion and the prevention of specific diseases have become new main pillars which support the health reform which we are trying to bring about in Japan.

Infectious diseases such as tuberculosis have been raging since the World War II postwar reconstruction period until around the high-growth period. But after it became a mature, stabilized society in which people were able to

enjoy a richer diet as today, life-style related diseases such as hypertension and diabetes began to rank high in the disease structure. Prevention of these diseases has become a new priority in the healthcare policies of our country, as it has in other developed countries.

Therefore, starting from April 1, 2008, health checkups and guidance for specific diseases will be implemented for all those who are above 40 years old, with the aim that all health insurance insurers will take responsibility for the health of individuals. The financial resource for this will be a health insurance premium, which was not permitted up to now. For the first time, national services related to preventive medicine will be provided to the public.

### More Focus on Access than Efficiency

In Professor Reich's analysis diagram, the intermediate performance measures were presented in the order of “efficiency,” “quality” and “access.” However, I would like to place “access” before “efficiency.” This is because when we discuss Japan's healthcare policies, priority given to access is very high.

The most prominent factor in Japan's healthcare system is its easy access. Today, however, the uneven geographical distribution of physicians and unbalanced development of specialties in Japan are becoming very serious problems. We must make every effort to assure that our people always have access to healthcare, by improving regional healthcare and upgrading the function of family physicians.

Next, there is the issue of “quality.” In devel-

<sup>\*1</sup> This article is based on a presentation made originally in Japanese at the Japan Medical Association Research Institute 10th Anniversary Public Lecture hosted by the Japan Medical Association at the JMA Hall on April 13, 2007.

<sup>\*2</sup> Vice-Minister of Health, Labor, and Welfare, Tokyo, Japan.

oped countries in Europe and the US, health reforms which concentrate on cost management have almost been completed. However, the decline in quality of acute care became a serious problem to solve. Giving cost management first priority resulted in lowered quality and access to acute care.

Even in Japan, it appears that many people in the healthcare field also feel that the quality of acute care will decline if the British type of cost management is promoted. However, as a Japanese politician, I strongly believe that the quality of acute care and access of patients to healthcare must not be lowered by health reform.

“Efficiency” requires that family physicians, acute hospitals, and recuperation hospitals work together to provide efficient care to the patients.

However, if we seek for “efficiency” focusing too much on cost management, then access, excluding access to family physicians, will be greatly inhibited, and I fear that this may cause disorder in the regional healthcare system.

### Securing Financial Resources for Those of Old-Old Age

Professor Reich asked in his lecture if “sustainability of financial security will be uncertain” due to aging of the population structure. As Slide 3 shows, the mortality in Japan is predicted to hit its peak in 2040. This shows directly that the need for geriatric healthcare will grow rapidly in the next 30 years, and the need for end-of-life care will also largely increase.

With these current circumstances and demographical changes, how can we make Japan’s health insurance system sustainable? Focusing on this, starting April 1, 2008, a new healthcare system for people of old-old age, which will include elderly people over 75 years of age and those from 65 to 74 years of age who are bedridden, will be put into effect.

This system will be financed by taxpayer money; patients will pay 10% and of the remaining 90%, the public expenditure will be approximately 50% of benefit expenses. This is the fundamental difference to other health insurance systems. If this much tax is not injected, it will not be possible to achieve a sustainable system for geriatric healthcare. In addition, the

remaining 40% or so will be financed by aids from generations still working and the last 10% by health insurance premiums.

If we look at the public finance in 2008, it will be approximately 4.7 trillion yen,<sup>\*3</sup> of which the national share will be 3.1 trillion yen, the prefectures will take care of 0.8 trillion yen, and local municipalities another 0.8 trillion yen. It is predicted that initially there will be this much economic strain. In 2015, due to the increase in elderly people, the public burden will definitely have grown to 6.8 trillion yen, consisting of 4.5 trillion yen for the national share, 1.1 trillion yen for prefectures, and 1.1 trillion yen for local municipalities.

I think that the discussion on how to find a stable way to secure finances will certainly become related to the discussion of basic reforms in the tax system, including consumption tax or added-value tax.

### Health Reform in the Nation-Building Debate

Let’s look at Slide 6. I drew it with the Japanese flag as a model. When we discuss health or healthcare, if we discuss it only in the framework of healthcare, it is hard to find clues to solving our problems because Japan’s social structure has become complex.

Our society consists of two kinds of societies. One is a job society where people work and the other is a regional society where people live. The family spans both of them, and within the family are the family members; individual people.

When we think about what healthcare will be like in the future, I think we must discuss the roles played by each social element.

What is the role played by the “nation”? The universal national health insurance system was established as a contract between the state and its people. However, I feel that what we might call a consensus of the people concerning the role of the nation has become unstable.

The “job society” previously had a stable life-long employment system; the people were assured of health and healthcare by occupational healthcare. However, this type of employment system has now weakened, and there are over 12 million part-time workers. The improvement

\*3 Yen/dollar exchange rate: 1 US dollar = 120 yen

of salary conditions for non-regular employees is being discussed in the Diet, but there is the question of to what extent can the job society maintain and develop its role of insuring health? This is a challenge which we must review.

In the “regional society,” relationships among neighbors have become sparse and people are no longer helping each other so much. These factors have started to affect insurance and healthcare system issues. In this kind of social situation, it is a great challenge for the nation to promote regional healthcare networks.

The health and healthcare of the “family” are closely related to what kind of family it is. With the increase of nuclear families and families in which both parents are employed, we must consider to what degree families are ready to accept what we could call dietary education and domicile healthcare. If we are to promote the improvement of domicile healthcare, we should re-discuss the function of the family in our country.

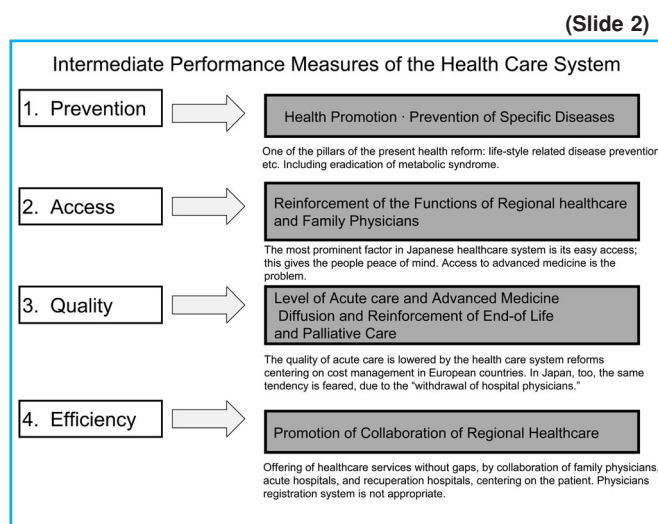
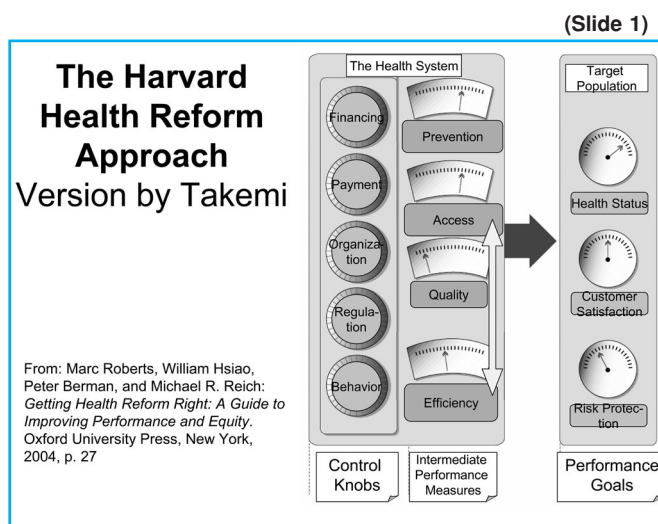
Finally, I would like to consider each citizen as an “individual.”

I myself followed a diet as a countermeasure

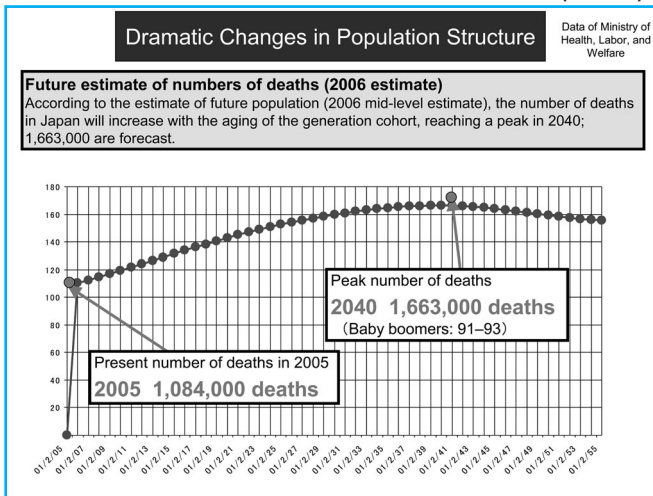
for metabolic syndrome, and strongly felt that even if the nation creates a system for health checkups and guidance for specific diseases focusing on preventive medicine, and provides such services to the people, these efforts will not be effective unless the people receiving the services become conscious and responsible themselves for maintaining their own health. Therefore, with preventive healthcare, we cannot expect effective results from policies; we must make it a national movement.

In order to create a society in which everyone can enjoy a healthy life, we should discuss again thoroughly about the roles played by the “nation,” “job society,” “regional society,” “family” and “individual.” Next, we must embed these roles among the people. By doing so, the society will be stabilized in a desirable form and the people will be able to feel at ease about the future.

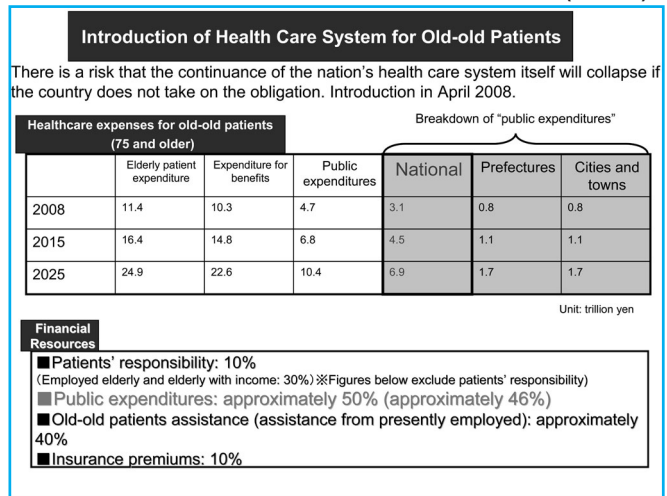
If we think in this way, healthcare policies will certainly mean “creating a Japan for the 21st century,” and therefore we must be aware that health reform must be carried out from a more comprehensive point of view.



(Slide 3)



(Slide 4)



(Slide 5)

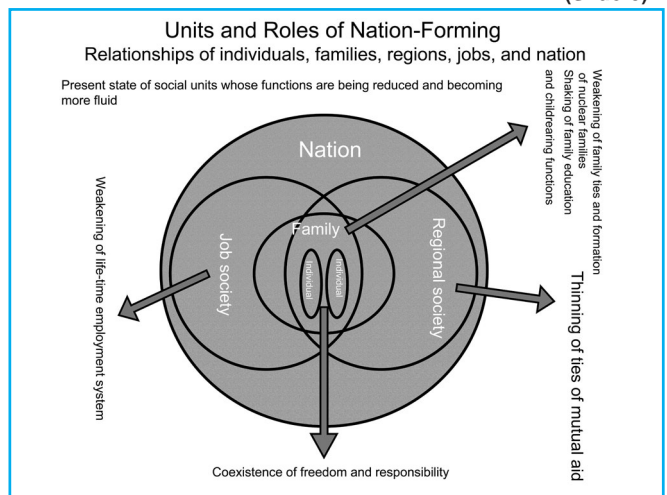
### Future Outlook for National Healthcare Expenditures, Healthcare Benefits, and Healthcare Expenses for the Elderly (Health reform base, January 2006)

Ministry of Health, Labor, and Welfare data

Year	2006 Budget base	2015	2025
<b>After reform</b>			
National healthcare expenses (trillion yen)	33.0	44	56
Elderly expenses (trillion yen)	10.8	16	25
Healthcare benefits expenses (trillion yen)	27.5	37	48
<b>Before reform</b>			
National healthcare expenses (trillion yen)	34.0	47	65
Elderly expenses (trillion yen)	11.1	18	30
Healthcare benefits expenses (trillion yen)	28.5	40	56

Note: The elderly healthcare expenses in 2006 are for those 74 years old and older; those for 2015 and 2025 are for those 75 years old and older

(Slide 6)



(Slide 7)

## Units and Roles of Nation-Forming

Relationships of individuals, families, regions, jobs, and nation

**Reconstruction through health care**

1. Nation : Security of persons based on national universal health insurance system
2. Jobs : Health security through occupational health
3. Regions : Promotion of regional health care collaboration based on regional health care and patients
4. Families : Basic functions of dietary education and health promotion · Domicile health care
5. Individuals : Prevention of life-style related diseases

Responsibility and awareness of need to protect one's own health



Discussion

## The Future Image of Japan's Healthcare

—Japan's healthcare in the eyes of the world—\*1



**Panel Members:**

Yoshihito KARASAWA  
President,  
Japan Medical Association  
Michael R. REICH  
Professor,  
School of Public Health,  
Harvard University  
Keizo TAKEMI  
Vice-Minister,  
Ministry of Health, Labour,  
and Welfare

**Chair:**

Eiji MARUI  
Professor,  
School of Medicine,  
Juntendo University

### Is Japan's Healthcare at a Turning Point?



**Marui:** I am Eiji Marui, professor of public health at the School of Medicine of the Juntendo University. Before this discussion, Professor Reich presented a view of Japan's healthcare from outside by

means of the Harvard Health Reform Approach and Mr. Takemi spoke about Japan's healthcare as seen from within Japan and considered the reconstruction of the whole society through healthcare.

There is a saying, "the child is a mirror reflecting the parent," and in a certain sense "healthcare is a mirror reflecting the society." Therefore, I think, we may be able to understand the whole society through its healthcare.

Now, we have been instructed to discuss the topic, "Is Japan's healthcare at a turning point?" Dr. Karasawa, what do you think about this?

### The "Grand Design 2007"



**Karasawa:** While listening to the presentations of these two gentlemen, the question of why the feelings of those who provide healthcare differ from those who receive it, the patients, differ impressed itself

strongly on me.

Although everyone involved in regional healthcare is truly making very great efforts, the patients who receive it are not satisfied. We need to determine what this difference comes from.

In the "Grand Design 2007" which the Japan Medical Association (JMA) recently released, we published the results of a survey of the awareness of the whole population and of those receiving healthcare. According to it, the quantity of care provided turned out to be very insufficient when compared with the quantity people found necessary.

\*1 This article is based on a discussion held originally in Japanese at the Japan Medical Association Research Institute 10th Anniversary Public Lecture hosted by the Japan Medical Association at the JMA Hall on April 13, 2007.



I think we should work on making healthcare more efficient, but it is actually operating at a high efficiency. As Prof. Reich noted, although Japanese healthcare workers are subjected to very severe time limitations, they are providing a high level of care by world standards. In Japan, healthcare is being provided by one-tenth of the number of healthcare workers in the United States, per patient. Also, compared with a ratio of total medical expenses to GDP which is 15% in the United States, it is approximately 7.9% in Japan and 7.7% in the United Kingdom. Yet, the latter could go over 9% sometime in the future, exceeding Japan.

The idea of the JMA was to think about how to make clear, numerically, the question of whether we could provide healthcare which would really satisfy the public in this sort of situation, that is, with respect to both the quality and the quantity of care.

As Mr. Takemi also pointed out, the number of deaths in Japan will increase in the future, as the baby-boom generation ages; in 2040, we will see a generation in which a maximum of 1,660,000 patients will need to be taken care of, and it will be important to develop a social security system which will support this. Since the expansion of healthcare which supports life and health is the greatest concern of the public, we

must pursue this.

Based on this situation, the JMA, as an academic body, has surveyed the situation of regional healthcare in the field, quantified it, and is proposing healthcare measures based on the evidence from the point of view that what form healthcare is provided in is the greatest need for the Japanese people. In the summer of 2007 we will publish the second edition of “Grand Design 2007,” with surveys and analyses of many topics, including cancer prevention, end-of-life healthcare, in-home care, pediatric care, obstetrical care, and so on.

### Who Will Play the Leadership Role in Turning the Corner?

**Marui:** In Prof. Reich’s talk, there was the outcome that the health status of Japan is “very good.” As the historical background, the universal health insurance is the system that has protected our people. Nevertheless, it was also indicated that the customer satisfaction is low. Could this be because we have become used to the “very good” situation, so that the level of demand for “more, more” is rising? Would people still be dissatisfied even if more care than now were provided? What do you think, Prof. Reich?



Auditorium of the JMA office



**Reich:** Public officials may be satisfied with statistical numbers, but the public and patients are not. They are dissatisfied as a result of thinking about their own healthy life expectancy and quality of life, and based

on their actual experience in the hospital. "Satisfaction" and "dissatisfaction" are results which are not observed objectively but felt subjectively.

**Marui:** Another question: we heard from Mr. Takemi that, in Japan, it would be preferable to add "prevention" as an intermediate index, and "access" should be considered more important than "efficiency."

**Reich:** I thought that that was a very interesting suggestion. We also heard from Mr. Takemi that the term "health policy" is not used in Japanese; I wonder why this is. I would say that this is not just a linguistic question.

With respect to the statement that "Japan's healthcare system is coming to a turning point," who defines this turning point? The more important point is, "How will we negotiate the turn skillfully? Who will take the leadership role?"

Mr. Takemi sketched a "nation-building" picture. Well, the questions are, "Who will do what? How will that role be decided on? What kind of country will we make?" People with many different values are involved in this process of nation-building through healthcare, and politics is also involved. The JMA should play a great role in this, and it should probably take on new roles.

**Marui:** Mr. Takemi, Professor Reich has presented three challenges.

### **Medical Policy, Integrated with the Point of View of Health Policy**

**Takemi:** The term "health policy" is not used very much in policy discussions; the term used is "Medical policy." The discussion has been carried out mostly from the point of view of "disease treatment." However, life-style related diseases in this period are becoming quite prevalent and we have reached a limit in discussing the subject only from the point of "disease treatment."

So now, in Japan, there is a demand that the point of view of health policy should be brought in and integrated with medical policy. For example, how will the health checkups and guidance for specific diseases which will start

on April 1, 2008 be seamlessly connected with the systems of "early diagnosis to early treatment and rehabilitation to return to society, and nursing care to terminal care?" The design of a healthcare system for performing prevention (examinations and guidance for the patients' lives) more effectively is in question.



### **Collapse of National Healthcare Is Feared**

**Karasawa:** I'd like to talk about this "turning point."

The medical association is proposing that national healthcare be protected. "National healthcare" means "the regional healthcare provision system" and "the national universal insurance system." These two pillars have supported Japanese national healthcare in a mutual relationship.

However, looking at the "Grand Design 2007," also, there is no doubt that future healthcare expenses will increase. In this sort of situation, as Prof. Reich also noted, the biggest problem is "how can we make the universal insurance system sustainable?"

As for the system providing regional healthcare, physicians working in the regions are now withdrawing; therefore, it appears that it might not be sustainable.

If this situation continues, I think Japanese healthcare will be bound to collapse in a few years. An unequal society in which healthcare is not provided equally to everyone is at the basis of this.

What could the JMA do to get the public to understand this situation? Who will provide the leadership?

The people who will take the lead will be politicians. Furthermore, the role of the JMA, I think, will be to strengthen its involvement in politics, so that the risk to Japanese healthcare will be recognized and national healthcare will be protected.

### **How Can the Voices of the Public Be Reflected in the Policy Decision Process?**

**Marui:** Mr. Takemi, as one of the key persons in

a leadership role, would you say something about the direction of health policy?

**Takemi:** First, from the macro point of view, I think that the consensus of the public is that the national universal insurance system, in which everyone is always assured that they will receive care, will be maintained. There is a great discussion in the political arena about what kind of policies will be needed in order to maintain it, and what problems are assumed in doing this. Moreover, we should make efforts to get all of the public to understand this subject and confirm the direction of policy with the resulting support or non-support.

Furthermore, in order to perform the macro policy, as Prof. Reich says, the micro point of view, in which the opinions of every member of the public will be carefully taken into account, is not lacking.

Specifically, it is very important that the voices of the various healthcare workers, including physicians, nurses, public health nurses, and others who are really involved with the public in the actual sites of regional healthcare be reflected in policy.

Thinking in this way, I think that roles of the JMA, as well as think-tanks such as the JMA Research Institute and related organizations, will become self-evident.

### **This Is Not a Simple Subject to Discuss, But a Better Discussion Process Should Be Found**

**Reich:** Health reform, and improving the health of a country's population, are not simple problems. The way to conduct the debate so that the national debates and answers are brought to light is not a simple question.

However, Japan has entered a new age. It has come to a time when the way the discussion is carried out must also be changed.

Politics, the JMA, mass media, the individuals of the public—all the participants in the discussion will be challenged to have a discussion which is not only “correct” but a “good process.”

**Marui:** You suggested that the process of coming

to an agreement may be changing. What do Mr. Takemi and Dr. Karasawa think?

**Takemi:** Due to the “prevention” point of view having been deeply introduced into medical policy in Japan, the self-responsibility and autonomy of the individual members of the public have been brought into the discussion. This will probably be one of the big challenges for the public.

**Karasawa:** Up to now, physicians have been single-mindedly devoted to “disease treatment,” but they are receiving a new challenge from preventive medicine and health promotion, from the point of view of the health reform which Mr. Takemi and Prof. Reich are talking about.

I believe preventive medicine will be a new field of healthcare in the future society of fewer young persons and more aged. Moreover, I think that a change of consciousness about end-of-life care is necessary. Some doctors have talked about a “revival of private-practice doctors,” and I think that we need to rethink the good points about the way healthcare used to be done.

**Takemi:** As Dr. Karasawa said, I think that the way of thinking in which, when healthcare is provided, the human relationships between physicians and patients are built on a foundation of relating closely to the feelings of patients as persons is a value which must not change in the future.

Also, family ties are weakening now, and it is important to nourish feelings of mutual aid in the family. I hope that this way of living in families will be revived through the field of healthcare.

**Marui:** The system will change, but I think that it is necessary, in the actual field of healthcare, not to be disturbed by the changing system, but to continue, in a secure way, the healthcare as it originally should be.

I am in charge of the secretary general of the Japan Association of Home-Care Physicians. In communities in which home-care medicine is going well, private-practice physicians and hospital physicians are playing the role of hubs which connect the local people and resources, and families are cooperating. I believe these kinds of local endeavors at the micro level should be reflected in the macro level healthcare policies.

# Measures to Address the Manpower Shortage in Anesthesiology in Japan

JMAJ 50(4): 325–329, 2007

Junzo TAKEDA\*<sup>1</sup>

## Abstract

The shortage of anesthesiologists affects the very core of emergency medicine—the operation of surgical units and safe management of patients—and is a problem that strongly influences the ability of emergency hospitals to survive. Thus the shortage of anesthesiologists has come to be seen as a problem for society as a whole. The Japanese Society of Anesthesiologists (JSA) has issued the “Japanese Society of Anesthesiologists Recommendations to Address the Manpower Shortage in Anesthesiology,” the recommendations including an analysis of the current situation as well as countermeasures. The recommendations indicate that the shortage of anesthesiologists has occurred as supply has been unable to keep pace with a rapid surge in demand and proposes that the problem be solved in the long term by increasing the number of anesthesiologists and in the short term through such measures as encouraging female anesthesiologists who are taking a break from medicine to raise children, etc. to return to the field and retraining registered anesthesiologists who are not JSA members, in addition to lightening the burden on existing anesthesiologists and increasing the number of surgeries through the improved efficiency of surgery unit operation and related duties and co-medical cooperation. Maintenance of the safety of medical care involving anesthesiology is desired by the general public, and fulfilling the demands of the general public will raise society’s valuation of anesthesiologists and by extension lead to an increase in the number of anesthesiologists overall.

**Key words** Shortage of anesthesiologists, Registered anesthesiologists, Recommendations

## Introduction

The 2004 Survey of Doctors, Dentists, and Pharmacists conducted by the Ministry of Health, Labour and Welfare (MHLW) found that anesthesiologists comprised a mere 3.7% of doctors working in hospitals and 2.5% of doctors working in other medical facilities. Because the shortage of anesthesiologists has serious repercussions for the safety of patients in surgery amidst a rise in the number of surgeries being performed, this shortage has become a social issue.

The Japanese Society of Anesthesiologists (JSA) began early to address the problem of the shortage of anesthesiologists. Because initially there was no even sufficient documentation to show whether or not there was indeed a short-

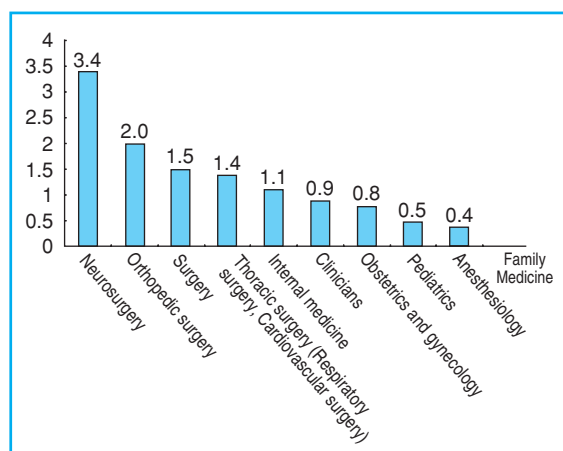
age of anesthesiologists, the society began conducting a questionnaire in 2003 and based on these results published the “Japanese Society of Anesthesiologists Recommendations to Address the Manpower Shortage in Anesthesiology” in February 2005.<sup>1</sup> Because it is necessary to fully understand the reasons for the shortage in order to formulate countermeasures, the recommendations include an analysis of the current situation as well as countermeasures. Detailed documentation regarding the questionnaire results was published in January 2006.<sup>2</sup>

## The Current Situation Regarding the Shortage of Anesthesiologists

It is not uncommon for “shortage of anesthesiologists” to be confused with “decrease in the

\*1 Department of Anesthesiology, School of Medicine, Keio University, Tokyo, Japan (jtakeda@sc.itc.keio.ac.jp).

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**Fig. 1 Comparison of the number of doctors in Japan and the United States for each medical department: The number of doctors in Japan if the number of doctors in the United States per capita is 1**

Note 1: United States data is the number of doctors specializing in each department as of June 2004 (in the United States, approximately 90% of doctors have specialist certification).

Note 2: Japanese data is for the “Main Medical Departments” based on the results of the 2002 Survey of Doctors, Dentists, and Pharmacists.

Note 3: In the United States, a distinction is made between Family Medicine (65,000 doctors) and Internal Medicine (161,000 doctors). If Family Medicine is included in Internal Medicine, the ratio of Japanese to United States doctor numbers is 0.75.

Note 4: Simple comparison of doctor numbers between the United States and Japan is difficult because in the United States, Physician’s Assistants and Nurse Practitioners perform some duties which would be performed by doctors in Japan and because the classification of medical departments differs between the two countries.

Note 5: In the United States, medical boards (medical specialist certification committees) for each medical department play a central role in the implementation of the Resident Program, which is a prerequisite to specialist certification. Because there is limitation on the number of residents in each program, it is not possible for doctors newly entering such programs to freely choose a department of specialization.

Source: “2nd Review Committee on the Demand for Doctors” documents. Ministry of Health, Labour and Welfare

number of anesthesiologists.” The MHLW survey included a comparison of the number of doctors per capita in Japan and the United States which showed that for anesthesiology, if the United States is 1.0, Japan is 0.4—the lowest number of all (Fig. 1), but in Japan in 1996 there were 4,800 doctors working mainly in anesthesiology and by 2004 this number had increased to 6,000 (Table 1). Furthermore, membership of the JSA, board certified specialist anesthesiologists and

**Table 1 The number of doctors working mainly in anesthesiology**

Year	Hospital (persons)	Clinics (persons)	Total (persons)
1994	4,504	179	4,683
1996	4,804	242	5,046
1998	5,315	270	5,585
2000	5,443	308	5,751
2002	5,748	339	6,087
2004	5,998	399	6,397

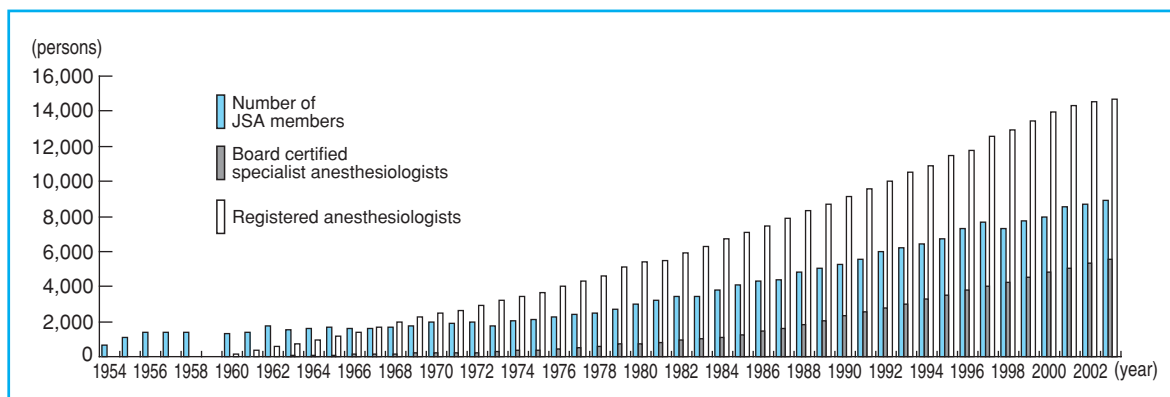
Source: “2004 Survey of Doctors, Dentists, and Pharmacists.” Statistics and Information Department, Ministry of Health, Labour, and Welfare.

registered anesthesiologists have continued to increase (Fig. 2).

This shortage of anesthesiologists despite an increase in their number can be said to be due to growth in the phenomena of demand for anesthesiologists outstripping the growth in their supply as a result of year-on-year increases in the number of operations performed (Fig. 3), intensive end emergency medical care, and the expansion of the scope of anesthesiologists work to pain clinics and palliative care. In the MHLW data mentioned above, 2,182 medical facilities had anesthesiology departments in 1996, but this number had risen to 2,510 by 2004. The incidence of anesthesia-induced deaths at training hospitals where there are board certified specialist anesthesiologists is very low—0.1 in 10,000—due to improved monitoring and the spread of specialist anesthesiology training. However, with the aging of society there has been an increase in the number of patients experiencing serious complications and more and more voices demanding greater patient safety, and consequently there has been increased demand for specialization in anesthesiology from the standpoint of medical safety and a subsequent decrease in the number of anesthesia administered by non-anesthesiologist doctors who specialize in another field of medicine. Although the true situation cannot be known, it is certain that, in contrast to the figures showing a mere 2–3% of doctors specializing in anesthesiology, a great number of surgeons have been involved in anesthesiology.

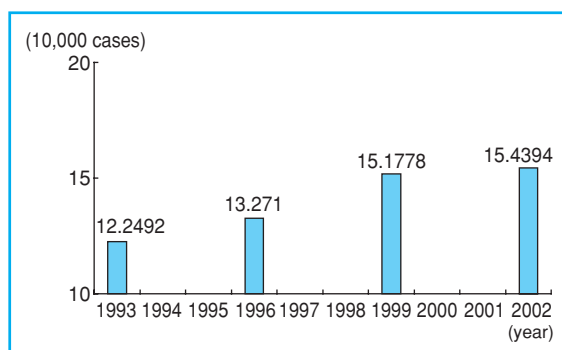
One reason why this shortage of anesthesiologists has surfaced is that postgraduate clinical





**Fig. 2 Trends in the number of JSA membership; board certified specialist anesthesiologists and registered anesthesiologists**

Source: [http://www.anesth.or.jp/dbps\\_data/\\_material/\\_localhost/news/pdf/200507250937\\_manpower.pdf](http://www.anesth.or.jp/dbps_data/_material/_localhost/news/pdf/200507250937_manpower.pdf)



**Fig. 3 Number of cases of general anesthetic in a month (September)**

Source: "Survey of Medical Care Facilities (Static/Dynamic)—Overview of Hospital Reports." Statistics and Information Department, Ministry of Health, Labour, and Welfare.

training has been made compulsory. Because university hospitals whose number of residents has decreased suffer manpower shortages, they have been forced to draw doctors from related facilities. Another aim of compulsory postgraduate clinical training—scaling down of the university's authority over personnel issues—has led to instructors leaving the universities and doctors being drawn away from the municipal hospitals where freedom is limited.

## Countermeasures

### Increase the number of anesthesiologists

The fundamental method for resolving the short-

age of anesthesiologists is to increase the number of doctors wishing to become anesthesiologists by improving the working environment and compensation and boosting motivation. Such measures would also encourage existing anesthesiologists to remain in anesthesiology. The JSA has continued to negotiate with related government ministries and agencies and relevant organizations and taken various actions such as approaching residents, and medical institutions have also made efforts to increase the number of anesthesiologists. And training a competent doctor is a task that takes many years.

### Utilization of female doctors and registered anesthesiologists

As short-term measures, the JSA recommendations have included finding female doctors who are taking a break from medicine to raise children, etc. and retraining registered anesthesiologists who do not practice anesthesia on a routine basis. The issue of female doctors is not limited to anesthesiology but is also a concern particularly for obstetrics and gynecology and pediatrics, where a larger proportion of doctors are women. Half of the JSA members aged in their 20s are female doctors, and when we consider that currently a third of medical school graduates are women (Fig. 4), this can be considered an important issue for all doctors.

"Registered anesthesiologist" is a national qualification with a long history, implemented in 1960 by the then Ministry of Health and Welfare

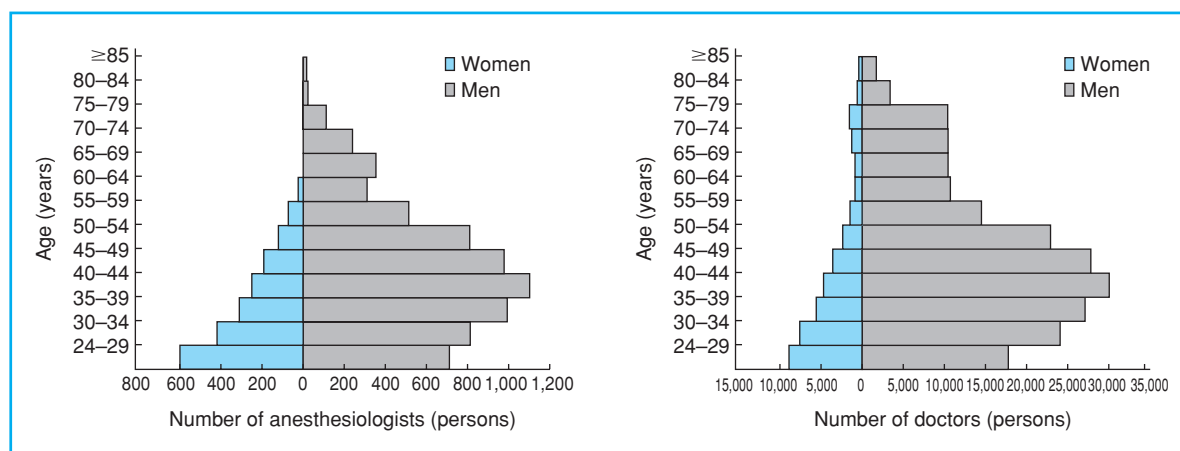


Fig. 4 Proportion of female doctors

Source: [http://www.anesth.or.jp/dbps\\_data/\\_material/\\_localhost/news/pdf/200507250937\\_manpower.pdf](http://www.anesth.or.jp/dbps_data/_material/_localhost/news/pdf/200507250937_manpower.pdf)

in order to maintain the specialized nature of anesthesiology. Many doctors who are not JSA members have also acquired this qualification. In fact, their number greatly exceeds the JSA membership. A proposal to retrain and utilize doctors with this qualification who do not routinely practice anesthesia is currently under consideration.

#### Efficient surgical unit management and work

Resolving the current shortage would require a great many more anesthesiologists. Effective use of the limited resource that anesthesiologists are requires efficient management of surgical units and work. The JSA recommendations include increasing efficiency through such measures as improving surgical unit capacity usage ratios, having anesthesiologists at nearby facilities assist each other, and reducing surgery time and length of time in the surgery unit, etc.

If surgery times are decided according to the convenience of the technicians, there will be periods of time when the surgery unit is not in use. However, as the number of consecutive surgeries requiring general anesthesia is limited by the availability of anesthesiologist, adjustments cannot be made at times when demand is high and some surgeries cannot be performed because there are not sufficient anesthesiologists. By doctors adjusting their schedules to suit the convenience of the surgical unit and thereby reducing ups and down in surgical unit use would go a long way towards resolving the shortage

of anesthesiologists and improve the economic efficiency of hospital administration.

Similarly, although all hospitals in a given neighborhood may have a shortage of anesthesiologists, they will have days or time periods when their surgery unit turnover is relatively low. Sharing anesthesiologists between nearby hospitals, or reciprocating nighttime on-call duties could improve working conditions for anesthesiologists. However, issues such as payment and insurance would still need to be resolved as administration systems differ from hospital to hospital.

#### Co-medical cooperation

The amount and length of duties performed by anesthesiologists needs to be reduced and efficiency increased through a system of cooperation with nurses, pharmacists, and clinical technicians; Increasing co-medical specialization and carrying out medical treatment in teams would enable the improvement of anesthesiology safety.

The system of “Nurse Anesthetists” in the United States frequently comes up in enquires. The United States has a long history of nurses administering anesthetic, since just after the use of ether began, and training is over a 2–4 year period following university graduation. In Japan, the term “Anesthetist Nurse” is used without there being any fixed definition of what kind of system it describes. The avoidance by non-specialist doctors of performing certain medical procedures as one way of avoiding risk and relegating those procedures as is to nurses—in



other words, the fact that anesthesia is in practice administered by both specialist doctors and by nurses—needs to be considered from the standpoint of the public and the universal health care system that aims to provide a high standard of medical care equally to all members of the public. The JSA is currently holding discussions with the Japanese Nursing Association with the aim of training “Perioperative Nurses” who are highly specialized and skilled.

### Anesthesiologists opening up medical practices

Anesthesiologists opening their own medical practices has mainly consisted of work centered on pain clinics, but recently there have been doctors who have developed their own so-called “part-time” anesthesiology practices with individually or in small groups.

At medical facilities affiliated with universities, the increasing number of anesthesiologists leaving the affiliated facilities means that the supply of anesthesiologists to the affiliated hospitals and even the university itself is decreasing. The impact of this and also the decrease of doctors at universities as a result of compulsory clinical training is particularly large, but does not mean there has been a decrease in the actual number of anesthesiologists. Facilities that do not require full-time anesthesiologists are now moving to use anesthesiologists more efficiently to cover only the days and time periods when shortages occur.

There is some argument that preoperative and postoperative care is not being properly provided; much of the criticism is that the dissolution of affiliate relationships will mean that maintenance of some facilities will become impossible and that the cost of anesthesia is too high. There are probably some doctors who require high anesthesia costs and the JSA requests that members are reasonable with regard to this issue; however, it is not clear to what extent this issue is impacting hospital administration.

The trend towards regular employment at

hospitals that allow a comparatively high degree of freedom is continuing, as there are often disadvantages to opening up medical practice—no social security, uncertain workloads, “workplace” cannot be written when required to fill in the “occupation” column on forms, housing loans cannot be obtained, and future security is uncertain.

### Role of the Japanese Society of Anesthesiologists

There are various factors causing the shortage of anesthesiologists and the situation varies between regions and facilities. For example, the shortages experienced by university and municipal hospitals have different causes and although sometimes the problem is a society-wide shortage, at other times the cause of the problem lies with the individual medical institution and so responses differ according to each cause. Moreover, the shortage affects not only anesthesiologists but all doctors. Thus the circumstances leading to the shortage of anesthesiologists are a microcosm of the problems facing the medical field as a whole. The JSA recommendations include various suggestions considered from various perspectives of ways in which government agencies, systems, regional distribution, and individual hospitals can address and resolve the problem.

Resolving the shortage of anesthesiologists means providing the quality and quantity of medical care demanded by the general public, but the increased demand by the public is one of the reasons the shortage came about in the first place. The work of anesthesiologists enabled hospitals to function and is a vital lifeline enabling the provision of better quality medical care. The fastest route to resolving this problem is to be conscious that this is important work with social responsibility and raise social valuation, boosting the motivation of anesthesiologists and increasing the number of doctors who wish to become anesthesiologists.

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# The IT Era and the Personality Formation of Children

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Kunio YANAGIDA \*1

## Torrential Changes in the Information Environment

Pursuing the theme of “crisis of life” in modern times, I have been engaged in expressive activities in the nonfiction genre. I visit the scenes of various affairs and social issues, investigate documents, and hear the opinions of specialists to uncover the changes taking place in people and society. Even with the facts, grasping the truth and entirety of an affair or a social issue requires imagination, as well as intuition.

Intuition supported by accumulated professional experience plays an important role in pinning down a problem occurring deep within a person and the complicated problems of modern society. In particular, when we consider the problems related to the personality formation of children and their minds, we need to base our thinking on the intuitive perception of whether “something is wrong.”

The influence of television and electronic games on the mental and psychological development of children has long been discussed since the dawn of the TV era. In particular, a relationship between the tendency of children toward violence and the use of television and games was claimed in the 1980s reflecting the spread of violence in families and schools. However, no effective solutions were proposed.

The technical advancement of games accelerated in the 1990s. Those played on a TV screen became more and more complicated and exciting with the evolution of software. Portable games became smaller and cheaper, gaining overwhelm-

ing popularity among children. Personal computers and cell phones subsequently came onto the scene, and email (mobile and PC), websites, BBS, 2channel, and other media on the Internet became familiar to children. In the 2000s, these became explosively popular among children, and the information environment around children underwent an extraordinary transformation. The new curriculums introduced to elementary schools and junior high schools in April 2003 declared that schoolchildren should be able to use PCs.

In parallel to these dramatic changes in the information environment over the past two decades, delinquencies and felonies committed by children and adolescents came to be characterized by motives beyond the comprehension of people with traditional common sense and ordinary sensibility. Workers in child nursing and education are concerned about children having retarded linguistic development and their tendencies toward self-centeredness and aggressive behavior. Furthermore, these childcare workers are disturbed by the self-centeredness of the parents of such children, which is making the situation even more difficult.

## TVs Are Harmful to Children Age 2 or Younger

In this article, the terms “electronic media” and “the IT (information technology) era” include not only the information revolution promoted by PCs and cell phones but also TVs, videos, games, and other visual media, because TVs and other conventional media transmit strongly influential information when combined with new IT media.

\*1 Writer, Critic, Tokyo, Japan (Fax: 81-3-5316-6156).

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The effects of the changing information environment on the mental and psychological development of children, which have been my intuitive concerns, are given a clearer shape and a concrete direction by the American Academy of Pediatrics (AAP). At the end of the 1990s, Dr. Ryota Hosoya, director of the Department of Pediatrics, St. Luke's International Hospital sent me a copy of his essay published in *Kurashi-No-Techo* magazine.

In the essay entitled "Face-to-Face Talks Rather Than TVs," Dr. Hosoya wrote about his observation of the children in his pediatric ward. With great concern, he noticed that children would start playing Game Boy® and video games as soon as they got up in the morning. In addition, he was astounded by the news that several junior high school students beat a homeless man to death, and suspected that modern children tended to lack a sense of pity that should have grown during their development. Dr. Hosoya introduced us to the AAP recommendations addressing the concern about the harm of TVs, videos, and computer games on the mental health of children. The AAP does not recommend television for children age 2 or younger irrespective of the contents of programs. For older children, the Academy recommends that parents should watch TV with the child, plan the child's viewing and set tight limits on the viewing time. The recommendations also emphasize the responsibility of pediatricians themselves in providing information to the general public and educating parents and children.

I felt like shouting "Bravo!" after seeing that the subject of my intuitive concern had been tackled squarely by an authoritative academic society in the U.S. As I read the copy of the original text of the AAP recommendations sent from Dr. Hosoya, I was surprised to learn that the Academy had been issuing such recommendations repeatedly since as early as 1990. I was very impressed by the statement that the direct exchange of words with parents or other caretakers is the most important thing for the development of the brain during the first 2 years of life, and for the development of social skills including the ability to accurately perceive the feelings of other people around.

Much had been discussed about the harm of violence, murder, and sex scenes in TV shows and games that might be inflicted on children and

adolescents who have not yet developed their critical ability. However, the AAP's bold assertion that excessive use of TVs and games by itself distorts the normal development of the brain and the formation of personality struck me as very significant.

### **Self-Centered and Aggressive**

Triggered by this information, I read a number of books from Japan and the rest of the world, including "Violence, Electronic Media, and the Silencing of the Written Word" by the American linguist and philosopher Barry Sanders (translation by Taku Sugimoto, Shin-Yo-Sha, 1998). Electronic media is heavily loaded with visual information, and visual information is extremely stimulating. The high-speed presentation of images does not give us time to digest our thoughts or experience our emotions fully.

Particularly in the case of computer games, the only things that occur in the brain are fierce negative emotions such as aggression, anger, haste, and vexation and motor reactions for reflective manipulation. As the opponent is a one-way stream of virtual visual information, there are no mutual emotional interactions—the process of continuously sensing the reaction of the other person and correcting or reinforcing one's own words and attitude, which is essential to rich emotional differentiation and the development of sympathy with others. Where there is no mutual exchange of emotions or the time for consideration, there is no room for the acquisition of linguistic abilities or the development of verbal expression.

While the adverse effects of electronic media on the personality formation of children have been discussed in a wide variety of literature, we have long been sensing the danger of electronic media using everyday common sense before such professional analysis. During the period from the mid 1960s to the early 1970s, when I was raising my children, there were no computer games and television was in its early stages. Although TV shows did not contain shocking scenes such as the murder scenes of today, we limited the viewing time to somewhere between 30 minutes and 1 hour, and we chose which programs we wanted to watch.

In and after the 1980s, with the improvement of income standards and the trend of leaving children to themselves, as well as the introduction

of smaller inexpensive TV sets, popularization of video recorders, and popularization of game machines, it became common for children to be allowed to use television, video, and games as long as they wanted. The penetration of video recorders made it possible to watch a scene repeatedly, intensifying the impression of images etched in the brain. The development of computer graphics (CG) enabled more powerful expressions of fighting, killing, and violent scenes.

Another important aspect of games is the ability to control the situation with the push of a button. If the situation becomes unpleasant or annoying, the player can reset or cancel the game at will. A special variety of such game was Tamagotchi in the earlier half of the 1990s. On the screen of this game, one can keep a virtual doll (person), pet, or plant and take care of it. If dissatisfied with the progress, one can always delete (kill) the character and restart the game. In this way, the player is tempted to think that he or she is at the center of the world and can rule the world at will. Indulgence in such games distorts the state of mind and personality formation.

This concern was evidenced by data from a questionnaire survey on the recent changes in parent-child relationships felt by 456 nursery teachers in Japan conducted by Naoki Ogi, educational commentator, in 1998. According to the results, a majority of nursery teachers pointed out the following traits of recent children: 1) staying up late at night, 2) self-centeredness, 3) tendency to panic, 4) aggressiveness, 5) lack of basic discipline, and 6) being good in the presence of parents. The data clearly demonstrated reasons for concern.

The nursery children mostly ranged in age from 4 to 6, and there were some 3-year-olds. These children would become higher graders of elementary schools 5 or 6 years later and reach puberty, when they start to reveal their ego. I was seriously concerned about what would be the personality makeup of these boys and girls.

### **Another Alias, Another Personality**

This concern was to materialize as a horrendous incident exactly 5 years later. A series of appalling juvenile cases preceded this incident, including the succession of vicious crimes committed by 17-year-olds in 2000. The involvement of the Internet in the factors affecting the mind and

behavior of delinquents was an undeniable fact.

The 17-year-old boy M, who hijacked a Nishitetsu highway bus in western Japan, was exchanging violent expressions in an Internet chat with others using aliases. He wrote "I'm going to kill them all" before the act. Another 17-year-old boy N, who hit a stranger with a hammer in a JR train in Yokohama City, also commented "Bus hijack is not enough" in a chat and wrote "I'll silence the world when the sun rises tomorrow."

Boys such as these use aliases on the Internet to pretend to be heroes. By condemning unidentified others, they exhibit their superiority as if they were monarchs. Although it all belongs to the virtual world, they are so deeply soaked in the virtual world that they become unable to distinguish between virtuality and reality, and bring their self in the virtual world into real society. They are not aware that they have committed awful deeds. A 17-year-old boy S killed a 67-year-old woman in the neighborhood in Aichi Prefecture simply because he did not like sleeping in peace and wanted to experience homicide. When the public prosecutor asked if he did not feel pity, he answered, "But she is already dead," without showing any sign of emotion.

The late Dr. Keigo Okonogi, psychoanalyst, analyzed the traits of these new vicious juvenile crimes in his book "Ketai Netto Ningen No Seishin Bunseki—Otona Mo Kodomo Mo Hikikomori No Jidai" [Psychoanalysis of Cell-phone and Net Persons—The Age of Withdrawn Children and Grownups] (Asukashinsha Publishing, 2000). He pointed out that indulgence in the Net, because of the convenience and fun, causes the risk of falling into the following pitfalls:

- (1) One uses an alias to assume another personality and unabashedly expresses words and information lacking human dignity and ethical values.
  - (2) One may have a sense of omnipotence in that one can move other people and the world at will with the push of a button. Repeated experience of such sense may lead to the development of a self-centered personality.
  - (3) One can terminate the relationship with another person at any time. Although email seems to facilitate close communication, it is often the case that email communication is nothing but a superficial exchange of words.
- Of these problems, (2) and (3) are common to the problems seen among children addicted

to games. Problem (1) of personality alteration resulting from the ability to transmit information under aliases is a new negative problem of net communities. (Both in the communities for grownups and those for children, the Internet is now flooded with slander and abuse targeted at individuals. Although I do not browse such parts of the Internet, my friends report that there are many ill words against me as well. Even persons with respectable intellectual levels can easily change personality and lose ethical discernment in an anonymous world. It is no wonder that children discovering the hidden fun of anonymous speaking lose control.)

### **No Mental Development beyond the Level of Age 6 to 8**

The length of time a child is exposed to electronic media is another important problem. Out of 24 hours in a day, a child has only a few hours that can be used at will. When I was a child, I used to play various games with children in the neighborhood on the street and in rice fields. Because I grew up in a large family, I experienced a lot of physical contact with other children even when I was at home. In contrast, children nowadays have few children around them, both in the neighborhood and at home. Except for the time spent at private tutor courses, they spend most of their time watching TV or playing computer games. As a result, the development of their ability to get their feelings across using language and the ability to think using language is compromised. The lack of sufficient emotional differentiation may cause significant distortion in personality formation.

Ms. Kinuyo Uozumi, a home education supporter of Neyagawa City, Osaka Prefecture, where a vicious juvenile crime took place, conducted a questionnaire survey of junior high school students and their guardians in Neyagawa City, Tokyo Metropolis, and Nagasaki Prefecture in the spring of 2005 to investigate the effects of computer games and other media on the life and personality formation of children. This was a fairly large-scale study in which questionnaires were sent to 4,762 persons and effective answers were obtained from 3,555 persons. Dr. Takashi Okada, a psychiatrist working for Kyoto Medical Juvenile Training School, analyzed the data from the Neyagawa survey from various aspects. Com-

binning the results with insights into juvenile crimes in Japan and other countries and adding his own experience with juvenile delinquents at the Kyoto reformatory, he wrote the alarming book "Nounai Osen" [Contamination in the Brain] (Bungeishunju Ltd., 2005).

Dr. Okada presented the data concerning the game addiction of children and resulting distortion of personality formation with unprecedented credibility. The essence of the data includes the following: (1) Children who were deprived of the love of parents in infancy show stronger tendency toward game addiction. (2) Children who started playing games before entering elementary schools show stronger dependence on games after entering junior high schools. (3) Children playing games for a longer time each day show a stronger tendency toward lethargy and apathy. In the condition of game dependence, the brain demands increasingly strong excitation and eventually "burns out."

As the conclusion from comprehensive evaluation of various data, including the personality characteristics of adolescents he saw at the reformatory, Dr. Okada claims that children of today (from elementary school children to junior high school students and high teens including high school students) are tending to stop mental development at the level of age 6 to 8. This, he argues, is the result of too much time spent in using various media and the lack of person-to-person contact. Of course, this does not apply to all children, but most juveniles causing problems show this tendency.

Mental development at the level of age 6 to 8 means the propensity to show the following tendencies: ►The distinction between reality and imagination is not clear, and the ability to predict the outcome of one's deeds is insufficient. ►The ability of sympathy to consider the position and feelings of others and be kind to them is underdeveloped. ►The need to search one's conscience and objectively reflect on one's past deed is hardly felt. ►The child tends to believe in a simple dichotomy between right and wrong, and easily runs headlong in either direction.

### **Self-Control in Electronic Media Use**

As mentioned earlier in this article, the report of Mr. Ogi on the propensities of nursery children in 1998 made me seriously concerned about what



these children would be like when they became high graders. This concern was representatively materialized in an incident that occurred 6 years later. In the spring of 2004, a 6-grader (11-year-old) girl of an elementary school in Sasebo City killed her classmate in the school. I used the word “representatively” because there were a number of other cases committed by boys and girls of similar age.

The final decision by Nagasaki Family Court Sasebo Branch recognized the following four points regarding the personality characteristics of this girl:

- (1) She was not good at verbalizing her feelings.
- (2) In her infancy, she rarely wanted a hug and spent most time playing with toys and watching TV alone. As she had little sense of security from being loved by her parents, she felt little affection toward others. Emotional differentiation was primitive, and she habitually suppressed emotions such as anger and sadness.
- (3) She was not good at understanding the context of a statement and grasping the entirety of a person. Rather, she responded to detached words.
- (4) She dealt with the emotion of anger either by suppressing anger or by explosively attacking the other person. She had only two extreme alternative reactions.

For a girl with such personality characteristics, the only places in which she could safely express herself and reconfirm her existence were exchange notebooks and the Internet, rather than in interaction with real friends. In such situation,

her indulgence in horror videos (movies) and horror novels enhanced her aggressive ego.

This girl can be seen as the embodiment of the effects of the parents’ lack of intimate demonstration of affection and the effects of the modern media environment. She was pitiable in a different sense to the victim.

When I learnt the background to this incident, I recognized anew the crucial importance of parent-child attachment, which the parents (or other caretakers) should demonstrate constantly by hugging the child in infancy, and also the need for controlling the exposure of children to electronic media. I was convinced that the practice of parents reading out picture books to their own children everyday is all the more important for the sake of reconstituting parent-child attachment and for the sake of children’s mental development (development of linguistic abilities and emotional differentiation). Furthermore, I propose that every family should have a “no-TV, no-game, no-Net week” about once every 2 months.

Reports from families following this advice are encouraging. When television is not turned on in the morning, both children and parents have breakfast peacefully before leaving for school and work. There is more conversation among family members, and parents become more perceptive about friend relationships and the mental development of their children—a suggestive observation that may help in bringing self-control back into the lives of grownups and children in the IT era.

# Japanese Study of Liver Diseases from an International Perspective

## —History of the past 50 years and future prospects—

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Kyuichi TANIKAWA \*<sup>1</sup>

### Abstract

Recollecting the author's personal experience, this article reviews the past 50 years in which the study of liver diseases in Japan developed through interaction with hepatologists in the world. The Japanese academic society dealing with liver diseases was founded in 1959 as the Japanese branch of the International Association for the Study of the Liver (IASL). It evolved into the Japan Society of Hepatology 5 years later, and the Society celebrated its 42nd anniversary last year. In this period, Japan hosted two IASL meetings, as well as various international symposia. Activities across national borders have also been increasing. The number of presentations from Japan accepted by the American Association for the Study of the Liver Diseases (AASLD) is now only second to that from the U.S. An important contribution Japan can make to the world may be the sharing of its ample clinical experience and study results concerning hepatocellular carcinoma.

**Key words** IASL, APASL, AASLD, Japan Society of Hepatology, Hepatocellular carcinoma

### Introduction

It was 1957 when I graduated from medical school. Starting from that time, I wanted to retrace how the study of liver diseases in Japan has developed over the past 50 years and how it has been positioned from an international perspective, referring to my own experience and suggesting future directions.

### Establishment of the International Association for the Study of the Liver (IASL) and the Japanese Branch of the IASL

In May 1958, the year after graduating from medical school, the first World Congress of Gastroenterology was held in Washington D.C., U.S. On this occasion, the people who envisioned a

study organization of hepatologists all over the world held a preparatory meeting for the establishment of the IASL. Professor Sadataka Tasaka (University of Tokyo) (affiliation and position are those at that time, as with the following) and Professor Tsuneo Yoshida (Osaka University) attended this meeting from Japan and were asked to set up the Japanese branch. This was probably the first interaction between hepatologists in Japan and other countries after World War II.

In the U.S., the first meeting of the American Association for the Study of Liver Diseases (AASLD) was organized by Professor Popper (Mount Sinai Hospital) as early as in 1959. In the same year, the general meeting of the IASL Japanese branch was held in Matsumoto City under the lead of President Sadataka Tasaka. The quick response of Japan in establishing this organization immediately after its American counterpart

\*1 Professor Emeritus, Kurume University. President, International Institute for Liver Research, Kurume, Japan (tanikawa@kurume.ktarn.or.jp). This article is a revised English version of a paper originally published in the Journal of the Japan Medical Association (Vol.135, No.4, 2006, pages 853–857).



signified that the study of liver diseases in Japan had progressed to a considerable level. In fact, this progress was convincingly reflected in the quality of presentations given at the meeting.

In the following year, 1960, the first IASL meeting was held in London under Professor Sherlock (Royal Free Hospital), the first president. While the World Gastroenterology Organization (WGO) and the IASL were created almost at the same time as places for international exchange, the IASL started as a closed circle of limited members. The WGO was therefore important as an open place for study presentation.

I first attended an international meeting in 1961, when Professor Popper visited Japan for the first time and a study discussion meeting was held at Gakushikaikan Akamon Hall of the University of Tokyo. As a postgraduate student, I presented my work on the electron microscopic study of intrahepatic cholestasis and was praised by Professor Popper. As a development from this occasion, my mentor Professor Seizo Miwa (Chiba University) served as a panelist in the symposium on intrahepatic cholestasis chaired by Professor Popper during the second World Congress of Gastroenterology in 1962 in Munich, Germany. I also spoke in the general academic program. At that time, the overseas travel of Japanese people was restricted under a national policy.

The second IASL meeting was held immediately after the World Congress of Gastroenterology in Germany. The third World Congress of Gastroenterology was then held in Tokyo in 1966, followed by the third IASL meeting in Tokyo and Kyoto under the lead of Professors Tadao Takahashi (Jikei University) and Masanori Masuda (Kyoto Prefectural University of Medicine) chairing the organizing committee. With as many as 14 Japanese speakers presenting their work, this meeting proved a good opportunity to introduce Japanese hepatology to the world. I spoke on the role of hepatic lymph in the development of ascites and jaundice, and received great commendation from Professor Sherlock, who chaired the session.

The IASL meeting was held at 4-year intervals and then at 2-year intervals at various venues in the world. The number of members increased, and the process for submitting a report became less difficult. Professor Kunio Okuda (Chiba University) served as the president for some time in this period. I chaired the organizing committee

for the 2000 IASL meeting in Fukuoka.

As mentioned above, the IASL and the WGO were important for a long time as top-level international academic societies and as places for international exchange in the study of the liver. However, both organizations have recently been shifting their emphasis from the exchange of high-level research information to the popularization of knowledge and therapeutic technologies regarding gastrointestinal and liver diseases.

The Asian Pacific Association for the Study of the Liver (APASL) has been promoting the study of the liver and mutual interaction of researchers in Asian regions. The first meeting was held in 1980 under the presidency of Professor Powell (University of Queensland). Later meetings were held at 2-year intervals, and the meeting in 2000 was held jointly with the IASL meeting in Fukuoka under the presidency of Dr. Michitami Yano (Director, Nagasaki Medical Center). The next meeting is planned to take place in March 2007 in Kyoto under the presidency of Professor Masao Omata (University of Tokyo). I am glad to see the steady growth of the APASL, helping the enhancement of the study of liver diseases in Asian countries. Japan is expected to be a good leader in this organization.

### **The Role of the Japan Society of Hepatology**

The organization created as the Japanese branch of the IASL changed its name to the Japan Society of Hepatology in 1965. The first general meeting of the Society was held this year under the presidency of Professor Tadao Takahashi (Jikei University), and the 42nd general meeting was held in May 2006 under the presidency of Professor Takeshi Okanoue (Kyoto Prefectural University of Medicine).

Considering the high level of hepatology in Japan, I believed that the study of liver diseases in the world should be promoted through friendly rivalry among the AASLD, the European Association for the Study of the Liver (EASL), and the Japan Society of Hepatology. When I was the president, I wanted to organize the 31st general meeting as a full-fledged international meeting. English was used as the official language, and symposia and general presentations were chaired by foreign and Japanese researchers in equal numbers. The purpose was to internationalize the

already high-level society in Japan on the one hand, and to let the people in the world know the level of hepatology in Japan on the other. The meeting was successful with about 150 participants from overseas. However, it is regrettable that none of later presidents followed this approach.

During my term as the director general of the Japan Society of Hepatology (from April 1996 to June 2000), the society decided to promote international contribution as a major objective and launched the International Symposium on Liver Cirrhosis and Liver Cancer. With particular emphasis on interaction with people in Asian countries, the symposium was held four times starting from 1996. After Professor Kiwamu Okita (Yamaguchi University) became the director general, a single-topic conference was held every year inviting top-class researchers from the world. This event has continued successfully to the present day.

As outlined above, the Japan Society of Hepatology is working with strong interest in international contribution.

### The AASLD and Other Developments

As mentioned above, the position of the WGO and the IASL as the center of international exchange and places for high-level academic discussion has been taken over by the AASLD.

One of the factors causing this change was the high level of basic study in the U.S. The recent discovery of the hepatitis virus causing liver disease and the development of anti-hepatitis virus agents both took place in the U.S. It was not surprising that the association in the U.S. became the center of information exchange regarding the study of liver diseases. Japan, as well as European countries, definitely has a insufficient number of researchers in virology in comparison with the U.S.

Recently, the number of presentations from Japan at the AASLD meeting has been increasing steadily. The number of presentations accepted at the 2005 meeting in San Francisco, summarized by country, is as shown in Table 1. While the U.S. was in the first place with 486 presentations, Japan was in the second place with 176 presentations, running ahead of Germany and the U.K. by a large margin. This number alone indicates the activity of study in Japan. While the AASLD is now the center of international exchange in the

**Table 1** Number of presentations at the AASLD meeting by country, top 10 countries (November 2005, San Francisco)

1	USA	486
2	Japan	176
3	Germany	114
4	UK	106
5	France	99
6	Italy	65
7	Spain	46
8	Canada	41
9	Australia	37
10	Netherlands	35

(Total number of presentations: 1,393)

study of the liver, the EASL is also making remarkable progress in enhancing the level of study.

Aside from the main activities of the society in the field of liver diseases, Japanese researchers have also been active in international conferences, study meetings, and symposia related to the liver. Under the framework of the US-Japan Cooperative Medical Science Program based on the agreement made in 1965 between U.S. President Johnson and Japanese Prime Minister Sato, the working team on hepatitis has been holding joint study meetings, starting from the first meeting in 1980 in New York. The chief of the working team on the Japanese side was Professor Toshitsugu Oda (University of Tokyo) at the beginning and is Dr. Shunji Mishiro (Toshiba General Hospital) at present. The joint meeting has been held alternately in Japan and in the U.S. I worked for the one held at Huis Ten Bosch in Nagasaki with great success.

A memorable event in this respect was the International Symposium on Viral Hepatitis and Liver Disease, which was held in Tokyo for 5 days in 1993 under the presidency of Dr. Kusuya Nishioka (Viral Hepatitis Research Foundation of Japan). The symposium was successful with many attendants from overseas. It also demonstrated the strength of the study of the liver in Japan. On the other hand, Professor Hiromasa Ishii (Keio University), who was at the center of the study of alcoholic liver disease in Japan, organized the meeting of the International Society for Biomedical Research on Alcoholism (ISBRA) in Yokohama in 2000. This event was also a great success. Professor Isao Okazaki (Tokai Univer-

sity) organized the international symposium on liver fibrosis, and published the splendid monograph entitled "Extracellular Matrix and the Liver – Approach to Gene Therapy" (Academic Press, 2003).

Starting from when I was on the postgraduate course, I have been enthusiastic about the electron microscopic study of liver tissues. At that time, Igaku-Shoin Ltd. was eagerly looking for opportunities to publish medical books written in English, and the company proposed to publish my book on the electron microscopy of the liver. This offer resulted in "Ultrastructural Aspects of the Liver and its Disorders," a book of 237 pages published in 1968. As there were no other books of this kind in the world, my book was accepted as a textbook for researchers in this field. It was distributed by Springer in Germany, and Spanish and Italian translations were produced by publishers in respective countries. I am confident that this book, sold all over the world, greatly helped the reputation of Japanese study of liver diseases. I was 35 years old at that time. More recently, many monographs in the field of liver diseases written by Japanese authors have been published, such as those of Professor Kunio Okuda.

In addition, Japanese researchers were particularly enthusiastic about the study of sinusoid cells. The Japanese forerunner in this field was Professor Toshio Itoh (Gunma University), who discovered Itoh cells, now generally known as hepatic stellate cells. I also was interested in these cells and conducted several studies on them. The term "sinusoid cells" generally refers to Kupffer cells, sinusoid endothelial cells, hepatic stellate cells, and Pit cells (NK cells). An international study association on these cells was organized by Professor Wisse (University of Leiden), who was in the Netherlands at that time. I was invited to the first symposium in 1977 and spoke on the clinical relevance of these cells. This symposium has been held at 2-year intervals. The one in 1994 was held in Kyoto under the lead of Professor Kenjiro Wake (Tokyo Medical and Dental University), and was a great success. As I was much interested in these cells after attending the first symposium, as well as because of the importance of these cells, I set up a study group on sinusoid cells in Japan. This year, the study group celebrates its 20th anniversary. The study of sinusoid cells in Japan is the most active and most advanced in the world.

## Future Directions

The study of liver diseases in Japan is at the top level in the world, only second to that in the U.S. This fact is testified by the number of presentations at the AASLD meeting and the number of papers in various journals. Membership of the Japan Society of Hepatology has exceeded 10,000 persons. No other academic society in the field of liver study has this many members. However, it seems that Japan is not showing sufficient leadership in the study of liver diseases in the world. The largest problem is the relative scarcity of unique studies originating in Japan despite the abundance in number.

One of the reasons is the fact that a great many young Japanese researchers have studied in the U.S. in the past 30 years, continuing to study in the American way after returning to Japan. I do not understand why so many people want to study in the U.S. now, decades after the post-war era, but I suspect that studying abroad has been a factor inhibiting unique studies in Japan. During my 21 years of tenure as a professor, I did not allow my students to study abroad as a rule. It was because I believed in the value of thinking by oneself and conducting study by oneself. Speaking of the uniqueness of study, I remember Dr. Toshio Shikata, Professor Emeritus of Nihon University, who invented the staining of HBs antigen-positive cells known as Shikata's stain, and Dr. Kazuo Okouchi, Professor Emeritus of Kyushu University, who discovered the relationship between the Australia antigen and hepatitis B virus.

The second reason is the fact that there are few persons with a good command of English, in particular among those in leading positions. Furthermore, Japanese people are not good at discussion. Japanese researchers must try to be more active in discussions at international academic meetings. Poster sessions are no exception. It is a starting point for global partnership.

The largest clinical theme in front of us at present is liver diseases related to hepatitis virus. Achievements in this field, from basic study to the development of antiviral drugs, have mostly been made in the U.S. In this field, Japan is no match for the U.S. at present.

Then, what about the future? In my opinion, the coming years seem to provide a chance for

Japan to become the top leader in the study of the liver in the world, as it has been the top runner in the study of liver diseases.

First, I think so because of the study and treatment of hepatocellular carcinoma. This disease has been increasing rapidly in Japan for 30 years, 10 or 20 years before the beginning of the increase in the U.S. As a result, we have much more experience in hepatocellular carcinoma than European and American researchers. While the increase in hepatocellular carcinoma has recently been attracting attention in Western countries, Japan is ahead of them in basic and clinical study related to this disease. So, we have the opportunity.

Second, Western countries are now experiencing a remarkable increase in non-alcoholic steatohepatitis (NASH) resulting from obesity. This condition is emerging as an important theme in addition to the aforementioned hepatocellular

carcinoma. NASH is also attracting much attention recently in Japan, and there is a growing recognition that this condition is not rare in Japan, either. Considering the genetic background of the Japanese people, I think that the prevalence of fatty liver or NASH in Japan is going to exceed that in the U.S. in a similar manner to type 2 diabetes mellitus. This type of fatty liver or NASH is currently considered as the liver manifestation of metabolic syndrome. However, I suspect that the changes in the liver may be the beginning of metabolic syndrome, because the liver is the center of various metabolic processes. I hope that Japan may take leadership in the study of liver diseases in the world through the promotion of the study of fatty liver and NASH and, furthermore, the study of metabolic syndrome focusing on the liver, in addition to the clinical and basic study of hepatocellular carcinoma.

# Saitama Medical Association: Recent initiatives

JMAJ 50(4): 340–342, 2007

Teruo HAYASHI\*<sup>1</sup>

Saitama is one of the prefectures neighboring Tokyo that is rapidly urbanizing, no less so than Kanagawa or Chiba. Saitama prefecture covers an area of 3,797.30 square kilometers, 39th in rank nationally, and has a population of some 7,050,000, comprising 3,550,000 men and 3,500,000 women. With an average age of 41.2 years as of January 1, 2005, Saitama is a relatively young prefecture. The proportion of elderly aged over 65 is currently 15.5%, ranked 47th (and therefore, lowest) nationally. However, the prefectural population will continue to age, and the race is on to establish the necessary infrastructure in terms of health care, public health and social welfare.

The Saitama Medical Association currently has a membership of some 5,500, including 3,300 A members (JMA A1 members) and 2,200 B members (JMA A2B, B and A2C members). The prefecture is home to some 3,350 medical institutions, including 350 hospitals and 3,000 clinics. Under the leadership of President Tadao Yoshihara, the Saitama Medical Association implemented an internal reorganization in 2004 and has since conducted its activities under the following organizational structure: 1) General affairs division, 2) Accounting division, 3) 1st community health care division, 4) 2nd community health care division, 5) Health insurance & hospitals division, 6) Academic division, 7) Social welfare division, 8) Information & publicity division and 9) Medical advisory division.

This article discusses the moot court for medical accident litigation (of the medical advisory division), the childrearing consultation service (of the 2nd community health care division) and the emergency infantile health care study group (of the health insurance & hospitals division) within this structure.



## Moot Court for Medical Accident Litigation

The medical advisory division launched the Saitama Medical Litigation Liaison Council in December 2002 jointly with the Saitama District Court and the Bar Association. The council is composed of judges, the Medical Association and patient attorneys. While it seems that in other prefectures, university hospitals or similar institutions lead the operation of such councils, in Saitama it is the prefectural Medical Association that takes the lead.

In March 2003 the Saitama Medical Litigation Liaison Council established two subcommittees. One is the 1st subcommittee to set up an expert selection system, and the other is the 2nd subcommittee to discuss planning and proposals for medical training for the legal profession and legal training for the medical profession and activity themes pertaining to these.

In July 2005 the 1st subcommittee established an expert selection system. The 2nd subcommittee played a leading role in planning and holding a conference on medical litigation at the Saitama Citizens' Health Center titled "Saitama

\* Executive Board Member in charge of General Affairs, Saitama Medical Association, Saitama, Japan (info@office.saitama.med.or.jp).



Medical Litigation Liaison Council Panel Discussion: Utilizing a Moot Court for Medical Accidents in Obstetrics and Gynecology.” This panel discussion comprised a moot court addressing medical accidents in obstetrics and gynecology that had occurred in the past conducted by judges, attorneys and members of the Saitama Medical Association medical advisory division who make up the Saitama Medical Litigation Liaison Council, along with a question-and-answer session. The program had its origins in the thinking of President Yoshihara, based on his 10 years of experience with medical disputes as the Executive Board Member concerned with them, that “the lack of mutual understanding between the medical and legal professions is complicating medical cases.”

The panel was attended by not only doctors, but also medical personnel such as nurses and clerical staff. Liaison Council members played the roles of doctors, patient attorneys, judges and experts and the judges provided commentaries in proceedings. Although they were amateurs, I think the members playing these roles gave powerful performances, the atmosphere was one of veritabily attending a court, with additional running explanation of the action, before one’s very eyes, and it allowed us to gain a deeper understanding of actual trial proceedings and judgments in health-care litigation. We are proud that this represented the first attempt at such an endeavor in Japan, and we both hope that it will serve to further mutual understanding between the legal profession and medical personnel and expect that such conferences will play a role in future planning and proposals and in the retraining of doctors.

### **Childrearing Consultation Service**

The Saitama Medical Association launched the childrearing consultation service as a support project for raising children in July 2005.

“We can’t have mothers slamming their own children onto the floor,” and “We need to create an environment in which mothers can raise their children without anxiety,” President Yoshihara, also a published author, often says in newspapers and other venues.

The 2nd community health care division oversees childrearing support and in April 2005 conducted a questionnaire survey of public health

centers, health care centers, child consultation centers and other childrearing support operations in Saitama to ascertain the state of childrearing support operations in the prefecture. The findings showed that there were fewer childrearing support operations than expected that had an association with health care and that the various institutions sought to have a joint relationship with health care. To provide childrearing support from the specialist position of a medical association and to resolve mothers’ concerns about childrearing, the Saitama Medical Association therefore established its own childrearing consultation service, available free of charge, in July 2005.

The service consists of receiving written inquiries on all aspects of childrearing from Saitama residents, these written inquiries that relate to health care then being shared out among members of the Saitama Medical Association’s childrearing consultation service operational committee, while those inquiries that do not involve health care are responded to through close working relationships with the operations surveyed. As inquiries made by telephone and email are covered by the Personal Information Protection Act that came into force in April 2005, the service currently handles written inquiries only. On establishment of the service, posters were distributed to county, city and ward medical associations, member health care institutions and municipal public health centers, health care centers and similar operations and the service was publicized in prefectural pamphlets, newspapers and similar venues, but as the service has yet to gain sufficient public awareness, a total of only 9 inquiries has been received, including 2 inquiries from August to October 2005, 3 in November. If the service receives greater publicity in future, we expect that the number of inquiries will increase considerably.

Though the opinion was expressed from the outset that handling written inquiries only would be problematic because young people have lost the habit of writing of late, in actuality we found that written inquiries, unlike those received by telephone or email, preserve confidentiality and engender a sense of affinity in both parties, generating a warm sense of trust between the person making the inquiry and the responding doctor. When some inquirers also sent polite thank-you notes, one felt anew the charms of written correspondence.

### **Emergency Infantile Health Care Study Group**

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Long work hours for pediatricians have become an issue with the national dearth of pediatricians. The workload of doctors handling emergency infantile care in particular has become excessive, and we currently seem unable to find a way towards a solution.

The county, city and ward medical associations in Saitama have requested that the Saitama Medical Association take the lead and discuss measures so that the county, city and ward medical associations will be able to handle the provision of initial emergency treatment. Being of the opinion that something must be done about the severe dearth of pediatricians, the Saitama Medical Association has therefore devised an

emergency infantile health care study group, sponsored jointly with Saitama prefecture, for internists and other advocates of pediatrics so as to train a certain number of doctors annually in pediatrics. Applicants were narrowed down to 100 in 2005, and 90 doctors participated in two sessions held on October 16 and November 27. The class which concentrated on the practical study of initial emergency treatment was well received, so much so that the participants requested that more time be allocated to it. Certificates of completion were presented to doctors who attended both days jointly by the Governor of Saitama and the President of the Saitama Medical Association.

These are some of the distinctive programs and operations to which the Saitama Medical Association applied its efforts in 2005.



# Continuing Internet Education Slated for Prefecture-Wide Availability

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Hiroimi ISHIKAWA\*<sup>1</sup>

### System Features

In June 2005, the Chiba Medical Association implemented a system for recording academic lectures offered in various locations and making them available for viewing over the Internet by Association members at their leisure. This entailed the installation of a dedicated server at the Association's secretariat and the use of software capable of playing back a lecture with video footage, its PowerPoint, or other documentation.

The software displays slides synchronized with the footage and audio of the speaker, achieving an experience almost identical to actually attending a real-time lecture. This server is available 24 hours a day and Association members may access it from any computer to view the lectures available on it anywhere and anytime. The user's computer must be connected to the Internet, but the continuing medical education (CME) pages are available to members entering their ID and password from their homes, clinics or absolutely anywhere else.

Individual viewing histories are maintained by the server, so a member may continue viewing from where he/she left off earlier. A busy member may view a lecture for only a short time and then resume after returning home. Also he/she may pause and resume viewing a lecture at his/her leisure, deciding that the quality of one lecture makes viewing another one more appealing. A user wishing to review the description of a particular slide may select that slide from a list to resume viewing the lecture from it. He/she may also back up and resume viewing a lecture from slightly earlier. In other words, this resource may



be used freely unlimited times for review study.

Further, since the server administrates a history specific to each member, we also considered it applicable to the assessments for the lecture attendance in the CME program of the Japan Medical Association (JMA). Before the system was launched, it was raised for discussion in the JMA CME committee, which determined that viewing a scholarly lecture authorized by a prefectural medical association on this system would count as one credit.

### System Utilization

The system was used by over 3,000 Association members through December 2005, exceeding the expectations of the Association executive board that installed the system. Even a scholarly lecture that enjoyed a real-time attendance of 50 or so would, in fact, have an online audience of over 400, and we are pleased to find that many members are viewing lectures useful to them in their routine work.

The choice of which lectures to make available via this system was an important issue. To study it,

\*1 Board Member in charge of Medical Information Systems and Scholarship, Chiba Medical Association, Chiba, Japan (h-ishikawa@min-iren-c.or.jp).

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a working group was formed from among the medical information systems committee, CME committee, system provider, and the Association secretariat. This nimble working group achieved its function and, through several discussions, succeeded in compiling a programming schedule to draw the interest of members and implement detailed improvements.

Chiba is a geographically large prefecture, and members may find it difficult to schedule the time to attend a lecture that they do, in fact, wish to hear. We believe this system may be used to spread CME opportunities with less regard to considerations of time and space.

One reason for the large audience is the elimination of the considerations of time and space, but we feel that another significant reason is the outstanding features of the distribution software. One might first note that members may view the lectures at their leisure, using a PC at home or at their clinic, in fact anywhere, provided it has an Internet connection and with little regard to performance.

Furthermore, the impression of repeat users is that the system has a pleasant composition in which the footage of the speaker and the display of his/her PowerPoint slides achieves an experience close to that of actually attending the lecture. Another major reason for its utilization is that even a lecture of an hour or more may be segmented for viewing as desired. When I observed an elderly officer using idle time at a meeting of the Association's Board to view a lecture, my expectation was that it would gain even more popularity.

### **Expansion of the System and Its Future Outlook**

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Before even a half-year had passed since its implementation, the proposal was put that it might be used to acquire credits for the renewal of specialist qualifications for ob-gyn departments.

After discussion and approval by the Japan Association of Obstetricians & Gynecologists and the Japan Society of Obstetrics and Gynecology, it is now possible to earn a credit by viewing any authorized lecture in whole. The secretariat server is able to confirm whether a lecture was viewed to the conclusion.

To work more closely with the target of vaccinations in Chiba prefecture in mind, we have recently updated new considerable material concerning public hygiene that we hope members will view, including a tutorial on recent BCG vaccinations and material on highly pathogenic avian flu and new forms of influenza. When we request presentations on issues connected with reforms to medical services compensation, medical services cost control policies or other aspects of healthcare policy, we also make these lectures available for viewing via the Internet. In short, we are publicizing the service as a tool, not only for academic lectures but for continuing medical education in a broad sense, to gain the viewership of as many members as possible.

Health care in Japan is generally said to be behind the curve in the application of information technology. It is true that medical associations are currently not making sufficient use of information technology when compared with their counterparts in the US and Europe, and the current generation of young doctors and medical students likely considers the computer skills of their elders in the medical associations to be lacking. However, when it comes to the promotion of information technologies by the medical associations, electronic medical records and ordering issues are not, by any means, the only points of entry. As this Chiba Medical Association program shows, the Internet may be used in ways that are personally quite accessible. We also imagine that the motivation of continuing education may be applied to encourage members to become more familiar with computers and also promote information technologies in this way.

# Disaster Medical Services: Medical response to the Niigata Chuetsu Earthquake

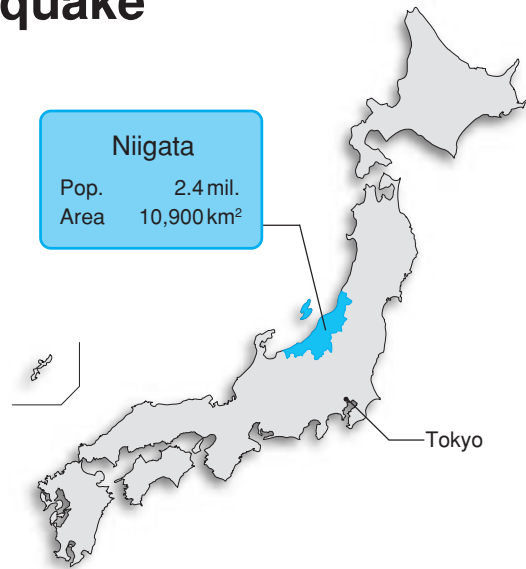
JMAJ 50(4): 345–346, 2007

Akio IMAI\*<sup>1</sup>

### Ongoing Issues 2 Years after the Disaster

More than 2 years have elapsed since the Niigata Chuetsu Earthquake occurred in Japan's Niigata Prefecture on October 23, 2004, with a seismic intensity of 7. Since then, events occurring as a result of the earthquake have been recounted, and details of the disaster have been reported and discussed on various occasions. Such discussion has included issues of how local physicians responded, what actions local medical associations took, and what systems the prefectural medical association and prefectural government employed in responding to the disaster. Criticism has included the lack of prompt communication and sharing of medical information as well as the lack of individuals able to take on leading or coordinating roles in the field.

The Niigata Medical Association set up an emergency headquarters immediately after the disaster to identify the extent of damage, medical needs, and the preparedness of medical facilities, while arranging cooperation with the division of health and welfare of the prefecture, which served as the disaster headquarters of the prefectural government. Although we attempted to collect information on damage to the facilities of medical association members, communication was problematic and sufficient information could not be obtained from areas near the center of the quake. As a result of these circumstances, it was not until 3 days after the quake struck that the association's clerical personnel were dispatched to the disaster site for support and information gathering. This was an indication of failed cooperation among the local medical associations in



the affected area, the local government, and the prefectural medical association.

The president and vice-president of the Ojiya-Uonuma-Kawaguchi Medical Association, a local medical association at the disaster site, reported the following issues to personnel from the prefectural medical association. The local medical association requested that the prefectural government and prefectural medical association dispatch someone who could supervise doctors in the affected area and take charge of assigning personnel and distributing medicines, areas in which the capability of the local medical association was limited. No one was responsible for overall activities. The disaster headquarters of the prefectural government did not have a proper understanding of the type of system needed to provide emergency medical care. The Japanese Red Cross Society was working extensively throughout the affected area, but required additional specialists after the acute phase, including internists, pediatricians, and psychiatrists. Although patient-oriented specific care of the injured or sick was necessary, no instructions or directives in this regard were issued by the government.

\*1 Board Member, Niigata Medical Association, Niigata, Japan (ken-ishikai@niigata.med.or.jp).

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Finally, although medical association member doctors were visiting shelters on their own and working as volunteers without regard to their personal safety, it was unfortunate that their assistance was not well recognized by others.

### **Disaster Medical Preparedness and the Role of the Medical Association**

The Niigata Chuetsu Earthquake pointed out the weakness of the disaster preparedness of our prefectural medical association, namely, that it employs a request-based approach, unlike the Japanese Red Cross Medical Center or other emergency medical centers that are able to act in accordance with their own judgment. We were charged with directing mobilization of relief squads in response to requests from the affected area, and our medical aid groups were to be deployed when requested by the prefectural government. Having reflected on these issues, the Niigata Medical Association continued to explore disaster medical preparedness and the role of the prefectural medical association in fiscal 2005. The roles of individual physicians and individual medical institutions naturally may differ from the activities of medical associations as a whole. Likewise, the roles of medical associations vary according to whether they represent the affected area, surrounding counties and cities, or prefectures. Given this situation, we have discussed the basic roles of medical associations in times of disaster, as summarized below:

- Serving as a contact point for medical information and services set up in the prefectural disaster headquarters

The prefectural medical association should establish an organization to serve as a contact point for medical information and services at the same time the prefecture establishes a disaster headquarters.

- Serving as a contact point for medical information and services set up in the headquarters at the disaster site

Local medical associations (county or city medical associations) should serve as contact points for medical information and services in the disaster headquarters established by the municipal government. The prefectural medical association should provide full backing to the functioning of the contact point at the disaster site. At the same time, a link with the contact point in the prefec-

tural disaster headquarters should be established.

- Collecting information

Actually visiting the disaster site is key to the acquisition of relevant information.

- Coordinating medical aid activities

A majority view is that it is necessary to have someone to coordinate medical activities provided by the various different parties. However, each party necessarily will have different needs and will require different services from the coordinator. Thus, the disaster medical coordinator should support and coordinate all medical aid activities in cooperation with emergency medical aid headquarters at the disaster site, and should have the power to make decisions and take action quickly to resolve problems, while communicating and negotiating with the prefectural or national government as the occasion demands. The position of coordinator is somewhat controversial, with possibilities including the head of the local health care center or a person sent from a disaster base hospital, a hospital that can accept patients in times of disaster and that has good supply of water, medicines, and medical materials to support other medical institutions in the affected area. However, determining what should be done and where it should be done is more important than determining the person who should do it.

### **Publication by the Local Medical Association**

In February 2006, the Ojiya-Uonuma-Kawaguchi Medical Association issued a monograph entitled "Record of Medical Activities in the Niigata Chuetsu Earthquake." The book, which has about 300 pages, includes many photographs. It also includes accounts of physicians and public health nurses who covered the affected area as well as details of a symposium held to examine disaster medical services in which a large number of interested parties participated from both inside and outside the prefecture. The book provides a graphic report of medical care activities initiated by 85 member doctors of the above medical association immediately after the disaster. This report also pointed out that the chain of command should be clarified and that the presence of a responsible authorized coordinator is indispensable, while calling for the issue of medical preparedness to be addressed more clearly in the overall disaster preparedness plan of the government.

## International Cooperation for Advancement of Medical Science

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Tai Joon MOON\*<sup>1</sup>

This year marks the 50th anniversary of neurosurgery being introduced to Korea as a new clinical field of modern medicine. To commemorate this historic moment, Yonsei University and Seoul National University organized a variety of events. Here I summarize some key points from an address I delivered at one of these ceremonies.

In just half a century, Korea's neurosurgery has become one of the finest in both clinical practice as well as education. This is indeed a remarkable achievement but Korea also deeply owes its success to active international exchange. Korea's modern medical history is very short—only about 120 years in total. Much of that time has been riddled with political turbulence and the Korean War. Despite such challenges, Korea's neurosurgery prospered phenomenally because numerous young aspiring Korean surgeons were invited to train at the leading U.S. hospitals. Upon returning to Korea, they succeeded in clinically applying their new skills and knowledge. Korea was very fortunate to benefit from continued international exchange since then.

Even though war is history's greatest tragedies, it has contributed greatly to the development of surgery. The Korean War was not an exception. It brought about significant changes in surgery, anesthesia and clinical pathology. The Korean military medical officers did not have much experience in treating gun wounds to the brain and spine when the war had broken out. To quickly bring them up to speed, the U.S. medical officers had to set up ad hoc training programs in the field hospitals. The war generated enough casualties to keep the Korean surgeons in the operation room all day long. This was the first Korean experiences in surgical treatment of brain and spine damage. This was how the creators of Korea's neurosur-

gery began their first steps.

However, in the 1970s, international exchange came upon a challenge. The U.S. medical system had started to change. In particular, the increase in malpractice suits and the launch of managed care began to limit the training opportunities for physicians from overseas. I recall that I visited many institutions including the American Medical Association to emphasize how decreased training opportunities could undermine the hard-won progress. I was also concerned about the negative impact of a sudden decrease in international exchange because the Korean medical field was already very accustomed to American pharmaceutical products and instruments.

In my speech at the 50th anniversary ceremony, I emphasized how international exchange was still essential in the field of medicine even today. I strongly urged the medical school authorities and department heads to work hard to provide training opportunities for today's young physicians. I also advised them to consider the institution's openness and interest in international exchange when selecting hospitals for training.

I then emphasized how Korea's own medical culture and environment should be respected and preserved while adopting the western medical sciences. In Asia, medicine is often referred to as a "benevolent art." This reflects the belief that ethics and morals should form the basis of medicine. Even though this basic principle is valid in both the East and the West, I do notice some differences in Korea. The Korean patient-physician relationship has its own strengths and weaknesses compared to the western model. Despite the rather mechanical and cold image medicine is gaining with the development of science, I hope a warm human relationship is

\*1 President Emeritus, Korean Medical Association, Seoul, Korea (intl@kma.org). Former President, World Medical Association and CMAAO.



maintained. No matter what, I want to avoid managed care's negative impact on the patient-physician relationship. As a last remark, I also added how we all need to be grateful to our patients because they also played an essential role in the remarkable development of Korean medicine as much as the teachers of advanced countries and the hard working medical professionals of Korea.

Lastly, I offered a piece of advice to the many fellow physicians. If a physician focuses on material gains, his/her life will not be beautiful or valuable. To be respected as physicians, we should feel blessed just with the opportunity to cure human diseases. We need to seek a sense of fulfillment from serving that holy mission. Currently, our

society suffers too much from the dominance of materialism. It is hard to deny that physicians are not exceptions to this trend. We need to improve medical training and emphasize a higher degree of maturity to aspiring physicians.

As physicians, we should fully appreciate the benefits of international exchange to the development of medical science, and in that context remember the historic contribution of the WMA. It has been promoting exchanges of medicine philosophy and ethics in many ways. As I look back on history—how international cooperation has generated the marvelous achievements in neurosurgery, I cannot but notice how splendid our world truly is.

### Some Scenes in the International Activities



Speech at World Health Assembly (1989)



Inauguration as WMA President (1985)



CMAAO Congress in Seoul (1981)



## Abundance of Medical Information— Shortage of medical orientation

JMAJ 50(4): 349–351, 2007

Peter ATTESLANDER\*<sup>1</sup>

Would you trust a machine? Probably you do not. You might rely on its functioning. Trust however has a quite clear intrinsic meaning: trust is a psychic and social process based on firm beliefs. You definitely will not trust a medical system as such but specific persons playing an important role in its institutions. It is above all the medical doctor on the daily front interacting with the patient before him that you trust, sometimes you have to trust. In many existential situations the patient lays his life in doctors' hands. He is confident about the physician's professional abilities, judgments and increasingly about medical orientation which only the physician is a master of. Many of us are lost before the growing amount of all kinds of public health advice, leaving us over-informed but under-oriented.

Can one measure trust in physicians? Indeed: since many decades, numerous surveys show that medical doctors are constantly granted one of the highest prestige statuses amongst all professions. There is no marked decline of trust in physicians, their general acceptance in spite of the fact that medicine is increasingly experiencing all kinds of pressure, economic, bureaucratic and stressful through the increasing velocity of medical technology development, inevitably leading to more specialisation. General anxieties are felt and unspecified critique finds its public. Mass media seem to be more interested in either sensationally reporting cases of malfunctions in our health systems, creating wrong hopes or propagating new therapies not yet applicable. They fail to adequately orientate the citizen.

Nevertheless, a traditional image of doctor's role still seems to persist today. This is in spite of magnifi-

cent medical technologies, new organization and miracles of medical practice. It is human empathy with the patient that the lone horse- and buggy doctor lived with centuries ago. Compared to our days, he had rather little to offer but himself and a handful of medicaments and instruments to use. What has changed since then? Do we not still talk of the physician himself as 'the most efficient medicament', and of his practice as being an art? Until today, the interaction between patient and doctor remains the most important source of trust. The more complex health structures become, the more important it is to safeguard the physician's role to offer medical and mental orientation to patients. Even those expert in using the internet are essentially in danger of getting lost in a labyrinth of information they are unable to interpret. Since trust is a social and mental process, it can neither be ordered, regulated or even administrated. Without orientation, patients will comply less with medical prescriptions. Compliance is amongst many other aspects predominantly the result of trust in the prescriptions and advice of the physician.

There are however many factors that endanger this (fortunately still persisting) common trust. The World Health Organisation (WHO) stated long ago that governments are responsible for the health of their citizens and can only discharge that responsibility by taking adequate measures in the health care and social spheres. To ensure fair distribution of medical services most so called OECD-states, representing modern rather wealthy societies, have introduced so-called cost-moderating laws. This results in wide spread fears that increased state intervention will further undermine the necessary state-free area of

\*1 Professor emeritus, University of Augsburg. Director, INAST Research Unit, Inst. Sociology, University of Neuchatel, Neuchatel, Switzerland (peter.atteslander@bluewin.ch).

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doctor-patient relations. Experience shows that more administration does not in itself lead to greater control over rising costs. States cannot be made responsible for individual health conditions. On the other hand it can be expected that they safeguard general policies which permit the best possible individual medical actions by all concerned. Adequate health care and social measures, however, always imply greater control and planning. It is not advisable to implement too strict bureaucratic norms at the cost of impeding doctor-patient relations. Individual behaviour is all too often influenced by state action, but it cannot be planned in detail, certainly not where health is involved.

The health care systems are highly complex. Today we do not know exactly how they function. At best we still find areas where it does not function. In future it will be impossible to satisfy every conceivable need. The total sum of individual needs as expressed, does not necessarily represent the need of a society at large on which state interventions (based on data from social epidemiological surveys, that rarely meet methodological expertise), are decided. General expectations of the kind aroused by too comprehensive WHO-postulates which interpret health as a state of "complete physical, mental and social well-being and not merely the absence of illness," cannot be transposed into legally effective entitlements for the individual. The inadequacy of a health care system which is widely perceived today, does not in itself point to the goals which should be set.

There is an increasing pressure not only to economise in healthcare systems, and also to harmonize procedures independent of cultural differences, leading to different social behaviour. This provokes ever more new regulation of health reporting. Warnings by many scientists have evidently not reached politicians and bureaucrats. Large sums have been wrongly invested trying to measure qualitative health matters with quantitative instruments. Of course health care has material and economic aspects, but all other predominantly qualitative processes cannot be measured by purely quantitative methods. Healing requires more than a functioning human body, and the physician more than a technician. It was an illusion that the highly dynamic structures of the health care systems could be regulated, finally controlled by simple material indices. It is an essential error to believe that the role of physicians can be stan-

darized. There is no such thing as a standard patient, just as there is no statistically determined average health situation. Beware of statistical artefacts when dealing with sick human beings.

Complex systems tend to be self relevant and hard to grasp. They are even harder to govern. In health systems responsibilities are often nebulous and poorly defined. Combined with economic restrictions and bureaucratic standardisation, more and more non medically trained agents tend to restrict physicians' traditional as well as prospective role. Their indispensable moral and ethical identity is thereby severely menaced.

The progress of modern medicine highlights in addition another problem, which may be described as the concept of pressure for 'positivisation':, especially in medical technology, surgery and pharmacology, where the quick and obvious successes and immediate effects are so apparent, experienced as "relief" and verifiable. Such pressure for their broad and instant application arises that it, in turn, increases demand leading to new problems of distribution, both of human resources and costs. This happens irrespective of the dangers of interactions with other medicaments, often only recognised only later.

There is growing hedonism regarding health: Eat the pills today, pay tomorrow, often with illness!

The progress in modern medicine is in many senses of the word, fantastic. One is tempted to say that as in other fields of technology we are offered more answers than we have questions for. In medicine this means that there are more investigation alleys and more therapies at hand than we can pay for. Ethical problems are not anticipated; adequate and fair distribution of medical services remains largely unsolved, rationing wide spread. Even rationalization, as the step before restricted distribution of medical services is declared, should rely on systematic, optimized action. In practice, rationing often fails to meet these criteria. The discussion, as to when it is necessary to omit certain therapy which has questionable perspectives, has only just begun. We are only starting to comprehend that the effects of modern medicine may also have important societal implications.

Illness must no longer be understood solely as the dysfunction of a biological organism. We have to learn and to understand it as a typical social attitude. This changes also the interaction between physician and patient. This aspect has been largely disregarded by medicine up to now

since the manifest successes of modern medicine conceals this weak point.

Illnesses which can be precisely defined in scientific terms and the disorders, for which clear forms of therapy exist, are increasing. Nobody would deny this success. Their relative importance measured against the general requirements placed on the medical system, is however rapidly declining. New and hard to define syndromes of illness are spreading. We see modern medicine as being caught in a dangerous trap between the growing availability of technical and medical expertise and the increasingly manifest and perceived lack of social health orientation.

Trust in physicians is in principle a qualitative property of highest importance. This holds true especially when we speak of healing processes. The question is pertinent, as to whether in future the precious asset of a free and humane doctor-patient interaction can be safeguarded against the strong influence of growing economization, bureaucratization (above all), in view of a growing non steered quantitative regulation in the health system.

One of the leading medical social scientists wrote decades ago “Medicine as a social institution has extremely broad functions. Not only does medicine deal with the prevention and treatment of pain, disease, disability, and impairment, but it also provides an acceptable excuse for relief from ordinary obligations and responsibilities, and may be used to justify behaviours and interventions not ordinarily tolerated by the social system without significant sanctions. The definition of illness may also be used as a mechanism of social control to contain deviance, to remove misfits from particular social roles, or to encourage continued social functioning and productive activity. Thus, the locus of control for medical decision making is a key variable in examining the implications of medical care for social life more generally.” Physicians have rapidly to overcome the manifold effects of the further growing specialization. More time will be demanded for interdisciplinary actions. Managing relevant information from different sources applicable in specific cases has yet to be learned. Most important, the uniqueness and intimacy in which human trust in the patient-doctor relationship can only grow, has to be defended with all appropriate means. We follow

Mechanic<sup>1</sup> in as far as we now witness the increasing velocity of bureaucratisation of medicine as having the effect of diluting the personal responsibility of physicians, making it more likely that interests other than those of the patient will prevail in the future. “By segmenting responsibility for patient care, medical bureaucracy relieves the physician of direct continuing responsibility. If the patient cannot reach a physician at night or on weekends, obtain responsive care, have inquiries answered or whatever, the problem is no longer focused on the failure of an individual physician, but on the failures of the organization. It is far easier for patients to locate and deal with individual failures where responsibility is clear, than to confront a diffuse organizational structure where responsibility is often hazy and the buck is easily passed. To the extent that the physician knows that a patient is his or her charge, the physician feels a certain responsibility to protect the patient’s interests against organizational roadblocks and requests that may not be fully appropriate. But when responsibility is less clear it is easier to make decisions in the name of other interests such as research, teaching, demonstration, or the ‘public welfare,’ whatever that might be” (p. 415).

Trust, as we said before, is based on firm belief. Belief in the doctor-patient relationship is often nurtured by hope, even if it is unrealistic and not to be granted. The more pressures of all kinds exist in this hybris of health systems, the more pressing is the question of what to do. My proposition is that the physician has always to be in the centre of information. We foresee that doctors will depend to a greater extent on other specialised experts and technical systems, will have to be the centre of information, and will not be able to carry the personal full responsibility for their patients. The physician may need assistance for the interpretation of relevant data, but he alone is in charge of the ultimate decisions. This entitles him to ask for all means and measures to live up to his responsibility for the good of his patient who trusts him. It is high time that the physician’s role has to be widely understood, honoured and enforced.

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# Sea Fish in Cologne

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Tatsuo KUROYANAGI\*<sup>1</sup>

## The city of Cologne

Cologne is located in the Middle Rhine region. When the ancient Roman Empire ruled the Mediterranean, a Roman fortress was built in this area, then known as Gallia. This is also the birthplace of Agrippina the Younger, the daughter of the Roman general Germanicus (Nov. 6, 15 AD) and mother of the infamous Roman emperor Nero. The city's name stems from Colonia Agrippinensis, a name given to the area in honor of her by Emperor Claudius, whom she married. Her name mysteriously disappeared, and "Colonia" remained.

The name Cologne is associated with two famous things, one being Cologne Cathedral. Built from 1248 and completed in 1880, the great Gothic cathedral was named a World Heritage site very early. It was the only structure that remained in the city after World War II, with the rest of the city left in ruins. The citizens worked for several decades to restore the buildings and streets to create Cologne as it is today.

The other is the "water of Cologne," or eau de Cologne. In the late 17th century, an Italian

barber named Feminis lived in the city and sold a concoction he called "eau admirabilis." The formula was later sold by Mühlens from 1742. When the soldiers of the Napoleonic army brought it back to France, it spread through Europe and later around the world.

## WMJ co-editor

Prof. Dr. med. Elmar Doppelfeld, the co-editor of the *World Medical Journal* and professor of medicine at the University of Cologne, also serves as Chair of the Permanent Working Party of Germany's Research Ethics Committees. He also appears to love to travel and, when attending international conferences, arranges sightseeing

trips with his wife before, after and even during breaks at such meetings.

During the 2004 WMA General Assembly held in Tokyo, he traveled to Hiroshima and Kyoto, attended a classical kabuki performance at Tokyo's Kabukiza, toured Asakusa and fish market districts of the city, and returned to visit the Kansai region before returning home. He said that Hiroshima impressed him most strongly, renewing his awareness of the devastation a nuclear bomb can cause and moving him to contemplate deeply about the tragedy. He added that he hoped to go to the Kabukiza theater in Tokyo when the opportunity arises. Prof. Doppelfeld is an editor with great wisdom, artistic sensibilities and intellectual curiosity.

## Sea fish in Cologne

When the WMA Mid-Term Council Meeting was held in Berlin in May, I met Mrs. Doppelfeld at a cocktail party held prior to the WMA-sponsored banquet. The topic was my daughter, who guided her through underground passageways from Kabukiza to the Imperial Hotel, amid typhoon weather. In the course of the conversation, a surprising topic came up. It was about Prof. Doppelfeld's father.

When late Emperor Hirohito visited Cologne in the autumn of 1971, Prof. Doppelfeld's father, who was an archaeologist, guided the Emperor through a museum (the Romano-Germanic Museum, probably). Strict warning had been issued in advance from the Japanese government not to try to shake hands with the Emperor.

When viewing glassware or mosaics on display at the museum, the Emperor asked Prof. Doppelfeld's father why salt water fish were portrayed, despite Cologne being located along the Rhine River. Although taken by surprise by the unexpected question, he quickly recovered,

\*1 JMAJ Advisory Member. Legal Advisor, Japan Medical Association, Tokyo, Japan (jmaintl@po.med.or.jp).

telling him that the colonial citizens during the times of ancient Rome knew about fish in the sea due to Roman influence and told the Emperor that he was correct in identifying the salt water fish.

The Emperor was very pleased by the response and suddenly reached out his right hand. The

senior Doppelfeld unconsciously reached out as well but quickly retracted, recalling the warning. Interaction of hands ensued, and the two finally shook hands. The Emperor reportedly beamed. Prof. Doppelfeld and his wife said that they heard the story repeatedly from his father.

Cheers to intellectual curiosity and peace!!

## How to Support Our Patients Who Are Staying Overseas

—JAMSNET: Medical support network for Japanese people in the US—

I visited the United States in June 2007, where I had the opportunity to meet with Professor Shunichi Homma at Columbia University and Dr. Koichi Nakamoto, a medical officer at the Consulate General of Japan in New York. Professor Homma is President of the Japanese Medical Society of America (JMSA), and in 2006 the society set up Japanese Medical Support Network (JAMSNET) to provide healthcare support to Japanese people living or staying in the United States and the New York area in particular. This network comprises around 20 NPOs based mainly in New York, including the JMSA, which plays a central role. JAMSNET also receives the full support of the Consulate General of Japan in New York, and so the project is a trial with the government and private sector working together. Consequently, Japanese people living or staying in the United States are able to contact and consult a Japanese health professional through this network when they experience health problems.

Whether they are residents or travelers, people who become ill while overseas are frequently filled with a sense of isolation and anxiety. When Japanese people who are already ill travel overseas, they rarely have a copy of their medical history in English or any other language with them to show the medical professionals treating them overseas. In other words, for the patient it may feel as if they have been cut off from the treatment they were receiving in Japan as soon as they leave the country.

In recent discussions at the WMA meetings, problems related to the international movement of physicians have been raised. The movement of physicians across borders involves various issues and therefore is an important topic requiring consideration. At the same time, we must not forget that patients also travel across borders.

Issues involve the question of who will care for patients and how, and particularly in the case of infectious diseases, there is the potential problem of infections spreading through multiple countries with the traveling patient.

Thus, from various perspectives, the JAMSNET trial in the United States is very interesting with regard to the question of how thoroughly medical care for Japanese patients overseas can be followed up. In order to better ensure support for Japanese patients overseas, establishment of a system enabling patient information such as medical records to be shared with local physicians would be highly desirable. In this era of active international exchange, I believe that trials such as this have the potential to contribute significantly over time to exchange and commoditization of healthcare information at a high level worldwide, and not only for the healthcare of Japanese people. Moreover, from a short-term perspective, too, I believe that the JMA should also seriously consider cooperating with and supporting this network in some way as a means to ensure quality healthcare provided to Japanese people in the United States.

Although this support program for Japanese people, focused mainly in and around the New York area, is now off the ground, I understand that financial and other problems are now surfacing. If there are similar cases in other countries or regions that you know of, please share that information so that it may be referred to in the construction of even better systems in the future.

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