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From the Editor's Desk

Grand Design 2007

Attaining the Best Public Healthcare for All Generations in Japan — Chapter 4

The Possibility to Secure Fiscal Resources for Social Security

JMAJ 50(6): 431–442, 2007

1. The Meaning of Social Security

"All people shall have the right to maintain the minimum standards of wholesome and cultured living. In all spheres of life, the State shall use its endeavors for the promotion and extension of social welfare and security, and of public health." (Article 25 of the Constitution of Japan)

All citizens in Japan have the right to education and the right to work after completing their education. After retirement, pensions provide security for living. Education, employment, and pensions are the basis of livelihood.

Similarly, healthcare and long-term care are the basis to support life itself throughout one's entire lifespan. When uncertainty about life itself and earning a living are minimized as much as possible, people can live with a sense of security. The system that supports such security is called social security, and it is even stipulated in the Constitution of Japan that the national government has a duty to make efforts to improve social security. Thus, in contemporary society, where it is difficult to live with a sense of security without a social security system, it is even possible to consider social security to be national security in peacetime (Fig. 4-1-1).

Diplomacy and defense are national security in emergencies, and tax revenues are invested in them in order to protect the nation. Although the balance between national security for emergencies and national security for peacetime will vary depending on the times, both are essential so that citizens can live with a sense of security. Furthermore, in order to respond to all possible scenarios, the national character must include both national security in emergencies and in peacetime.

In Japan today we often hear arguments that, "there is no way to avoid reducing social security spending." In this chapter we distance ourselves from this tendency, show the character of the nation from the perspective of fiscal policy, and discuss the possibility of fiscal resources for social security.

2. Japan's Fiscal Policy Situation

(1) The nature of debt

The 2006 "Basic Policies" document[1] sets a goal "to achieve a surplus in the primary balance of the central and local governments combined by FY2011." Creating a surplus in the primary balance means that tax and other revenue will be greater than the sum of general budget spending plus the local allocation tax. In other words, the balance situation will not depend on issuing new government bonds. (Fig. 4-2-1).

The background for this goal is the awareness that Japan has massive public debt. Government debt in the form of government bonds and other borrowings (hereafter referred to as "debt") reached 832 trillion yen (US$6.9 trillion) in December 2006. With respect to this situation, the Finance Ministry has the odd practice of stating only the increase in general budget spending, and argues that the main reason for rising debt is increase in social security spending associated with the aging society.[2]

The titles of Japanese materials listed in the footnotes are translated by JMA and indicated as (*J*) unless they have an English version.
Yen/dollar exchange rate: 1 US dollar = 120 yen. The fiscal year in Japan runs from April to March.

1 Council on Economic and Fiscal Policy, "Basic Policies for Economic and Fiscal Management and Structural Reform 2006 (Summary)," July 2006. Online at http://www.keizai-shimon.go.jp/english/publication/pdf/060802_basic_policies_summary.pdf

2 Ministry of Finance, "Considerations on Japan's Fiscal Policy" (*J*) September 9, 2006, p. 6. Online in Japanese at http://www.mof.go.jp/jouhou/syukei/sy014_1809.pdf

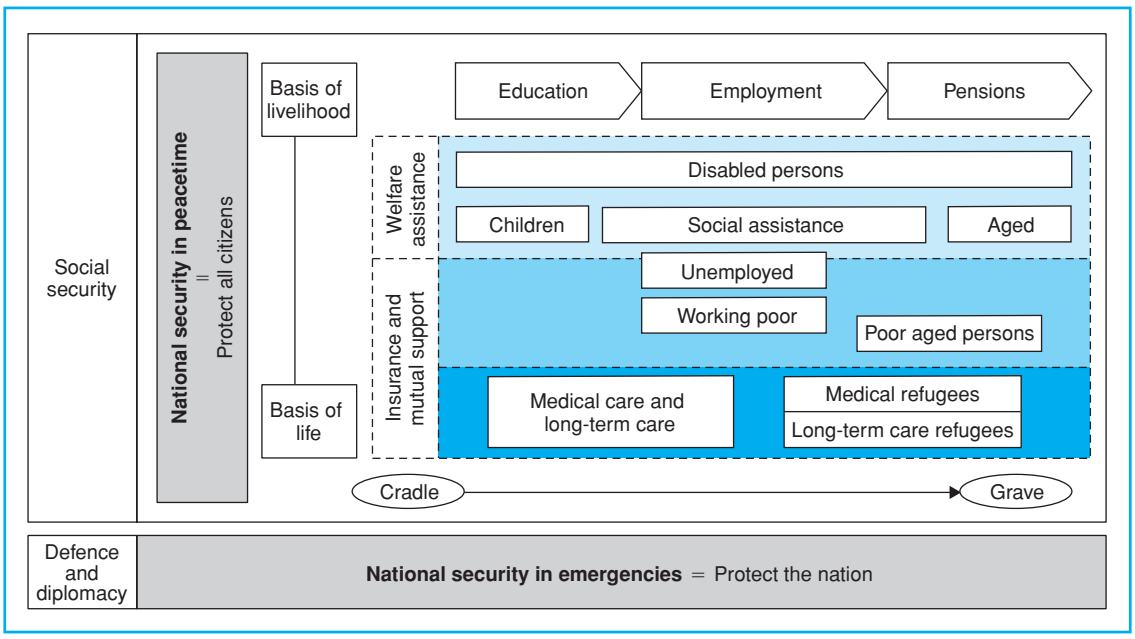


Fig. 4-1-1 Life cycle and national security

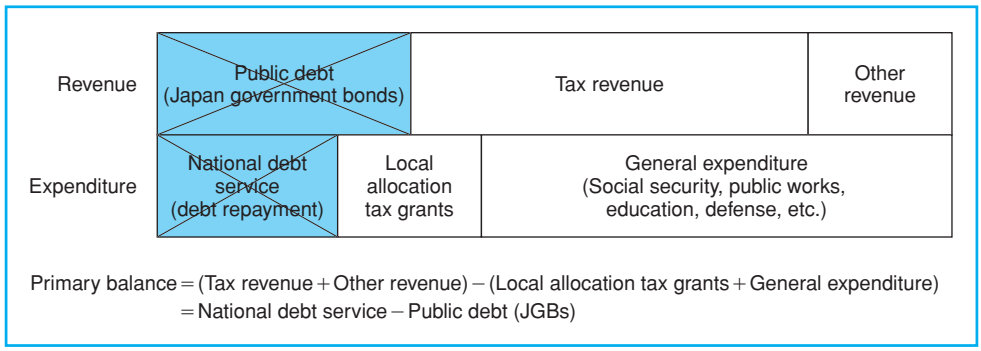


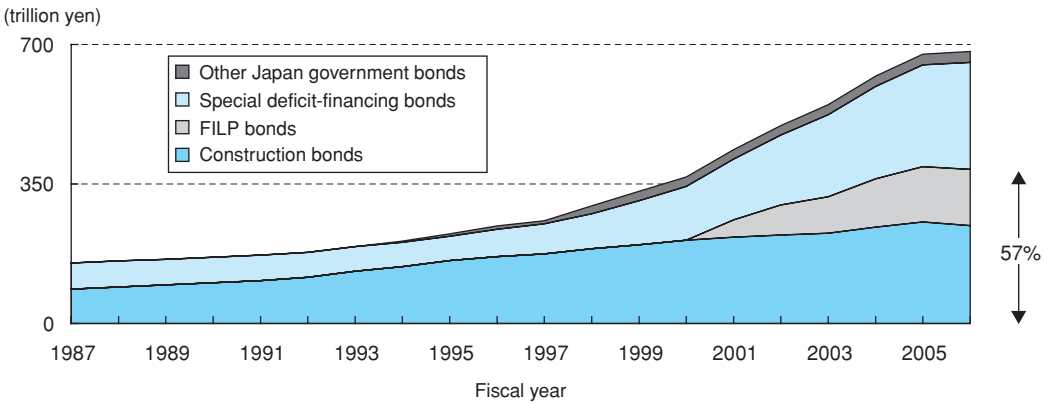
Fig. 4-2-1 Definition of primary balance

There are several points to keep in mind about Japan's debt.

First of all, today's debt is not primarily due to social security spending. The Public Finance Law in Japan states that "Regarding fiscal resources for public works spending, investments and loans, it is possible to issue government bonds or borrow money within the limits established by a resolution of the National Diet." What the law specifically allows is the use of national government bonds to finance public works projects. As a result, about 60%[3] of the outstanding balance of government bonds (ordinary and Fiscal Investment Loan Program (FILP) bonds[4]) are construction bonds and FILP bonds for financing public works projects (Fig. 4-2-2).

3 Calculated based on the "Trends in Composition of Government Bonds and Borrowing Outstanding at the End of FY for the Past 10 Years" (*J*) on the Ministry of Finance website, http://www.mof.go.jp/jouhou/kokusai/siryou/zandaka02.pdf

4 Formerly, the entire amount of money in the pension system and postal savings had to be deposited directly with the Trust Fund Bureau of the Ministry of Finance (Ministry of Finance Trust Fund Bureau Special Account), which then made loans to FILP agencies such as Special Public Corporations. After FY2001, the obligation to deposit the entire amount ceased, and the Fiscal Loan Fund (Ministry of Finance Special Account for Fiscal Loan Fund) issues FILP bonds in the financial market to raise funds and offer loans to FILP agencies.



* Based on the Ministry of Finance website, "Trends in Composition of Government Bonds and Borrowings Outstanding at the End of FY for the Past 10 Years." The figures for FY2005 and 2006 are estimated.

Fig. 4-2-2 Composition of the outstanding amount of general bonds and FILP bonds

Table 4-2-1 Connection between primary balance and total amount of government bonds and borrowings

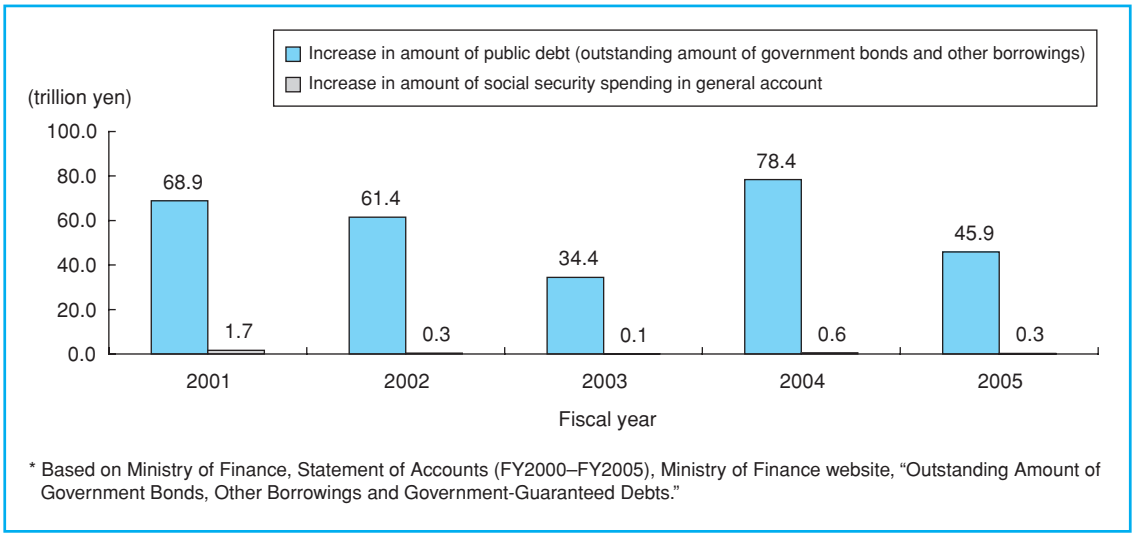
(trillion yen)

	FY2001	FY2002	FY2003	FY2004	FY2005
Tax revenue	47.9	43.8	43.3	45.6	49.1
Other revenue (excluding government bonds)	9.0	8.5	7.0	7.8	8.7
① Income (excluding government bonds)	56.9	52.3	50.3	53.4	57.7
② Expenditure (excluding debut service)	69.0	68.1	66.9	67.4	66.8
Primary balance (①−②)	**−12.1**	**−15.8**	**−16.6**	**−14.0**	**−9.1**
General Japanese government bonds	392.4	421.1	457.0	499.0	526.9
Fiscal investment loan program bonds	43.8	75.6	91.8	121.6	139.4
Other government borrowings	171.1	172.1	154.3	161.0	161.2
Total amount of government bonds and other borrowings outstanding	607.3	668.8	703.1	781.6	827.5
Increase	68.9	61.4	34.4	78.4	45.9
Social security related spending in the general expenditures	19.3	19.6	19.7	20.3	20.6
Increase	1.7	0.3	0.1	0.6	0.3

* Based on Ministry of Finance, Statement of Accounts (FY2000–FY2005), Ministry of Finance website, "Outstanding Amount of Government Bonds, Other Borrowings and Government-Guaranteed Debts."

In Japan, there was a time when the percentage of the workforce in construction was over 10%,[5] and public works had an importance as employment policy or a support for the economy. In the era of high economic growth in 1969, the New Japan Comprehensive Development Plan was created, and government investment amounts (by public corporations and other bodies established by national and local governments) soared nearly every year until the bubble burst in 1991.

5 Ministry of Internal Affairs and Communication, "Labor Force Survey." (*J*) Construction employment peaked in 1997 with 6.85 million workers (annual average), reaching 10.1% of the labor force.



* Based on Ministry of Finance, Statement of Accounts (FY2000–FY2005), Ministry of Finance website, "Outstanding Amount of Government Bonds, Other Borrowings and Government-Guaranteed Debts."

Fig. 4-2-3 Connection between increase in social security expenditure and debt

But the fiscal situation of local governments deteriorated as a result of local government bonds issued as part of the plan. This in turn led to greater disparity among regions.

The outstanding balance of FILP bonds reached 139.4 trillion yen (US$1.2 trillion) by the end of fiscal year 2005 (Table 4-2-1). The outstanding balance of FILP bonds forms nearly all of the capital resources for the Fiscal Investment and Loan Program (a much smaller portion of FILP is raised through postal savings, pension funds and other surplus amounts from the Special Account). The total loan amount outstanding by the end of fiscal year 2005 was 299.6 trillion yen (US$2.5 trillion).[6] The main borrowers were the Japan Housing Finance Agency with 46.4 trillion yen (US$386.7 billion) and the Japan Expressway Holding and Debt Repayment Agency with 28.7 trillion yen (US$239.2 billion). The latter organization was established to manage the assets of the four major public corporations[7] for expressway and bridge construction after privatization. It leases the assets to the newly privatized bodies. Although the reforms of public corporations that privatized some and created independent administrative corporations from others has shifted the debt off the budget and the statement of accounts of the national government, the basic structure that relies on government borrowing for fiscal resources must still be closely monitored.

Special deficit-financing government bonds, commonly known as "deficit bonds," are not permitted under the Fiscal Policy Law. They are issued each fiscal year by authority of a law allowing a special exception. The first postwar deficit bonds were issued in 1965, and then issued from 1975–1990, and from 1994 to the present. Over time the meaning of "special" has become rather weak.

One should also remember that Japanese government bonds have in principle a 60-year repayment rule. Naturally no one would buy a 60-year bond, so they are issued as 5- or 10-year bonds which are then in turn refinanced later. Current increases in spending do not give rise to much debt, since that debt has been accumulated over 60 years. Accordingly, the deficit in the primary balance and the increase in the balance of government bonds and debt have no direct connection (Table 4-2-1).

Let us consider again trends in the increase of social security spending in the general account and the increase in amount of debt (Fig. 4-2-3).

6 Board of Audit of Japan, "Audit Report on 2005 Statement of Accounts, 5. Overview of Japan's Fiscal Policy (3) Fiscal Investment etc." Online in Japanese at http://www.jbaudit.go.jp/gaiyou17/index.html

7 Japan Highway Public Corporation, Tokyo Metropolitan Expressway Authority, Hanshin Expressway Authority, Honshu-Shikoku Bridge Authority.

Table 4-2-2 Closing statement of general account and special accounts

(trillion yen)

		FY2001	FY2002	FY2003	FY2004	FY2005
General account	Revenue	86.9	87.3	85.6	88.9	89.0
	Expenditure	84.8	83.7	82.4	84.9	85.5
	Difference	**2.1**	**3.6**	**3.2**	**4.0**	**3.5**
Special accounts (Simple total)	Revenue	396.2	399.7	385.8	419.3	452.1
	Expenditure	363.3	373.9	357.7	376.0	401.2
	Difference	**32.9**	**25.8**	**28.1**	**43.3**	**51.0**
Total (Simple total)	Revenue	483.1	487.0	471.4	508.2	541.1
	Expenditure	448.1	457.6	440.1	460.9	486.7
	Difference	**35.0**	**29.5**	**31.3**	**47.3**	**54.4**
Net total	Revenue	275.7	267.1	251.7	279.2	279.3
	Expenditure	248.3	245.4	230.9	233.3	232.5
	Difference	**27.4**	**21.7**	**20.8**	**45.8**	**46.9**

* Figures prior to FY2004 are from Ministry of Finance, "FY2006 Fiscal Statistics."
* FY2005 is projected based on the National Statement of Accounts.

Debt in FY2005 increased by 45.9 trillion yen (US$382.5 billion) from the previous year, but the increase in social security spending was only 0.3 trillion yen (US$2.5 billion). After FY2002, social security spending increases were never more than 1% of the increase in debt. In other words, it is clear that reductions in social security spending would have very little impact on debt reduction.

Based on the above considerations, the main cause of Japan's debt is not social security spending. Therefore, we would like to establish a different conventional wisdom: that social security spending should not have to shoulder any of the responsibility for debt reduction.

(2) Consolidated national fiscal status

Can we really say with certainty that the increase in current debt is due to social security spending?

When budgets are planned, when it is reported, "social security spending is over 40% of general expenditures," it is made to appear as though social security spending accounts for a large portion of the budget. But "general expenditures" means nothing more than current general account, excluding debt service, the local allocation tax, and other expenses. In terms of the overall general account, social security spending accounts for only 20% of the total.

Japan also operates a system of special accounts (containing 31 accounts at the time of the fiscal year settlement of accounts in 2006) separate from the general account. Here we develop an overall picture of the fiscal status on a settlement basis that consolidates the general account and special accounts. This approach is very different from ordinary approaches that only look at the budget.

Simple addition of the general account and the special accounts on the basis of the FY2005 settlement results in revenue of 541.1 trillion yen (US$4.5 trillion) as opposed to 486.7 trillion yen (US$4.1 trillion) in expenditure (Table 4-2-2). It must be remembered that there is overlap between the general account and the special accounts as well as within the special accounts. If we exclude amounts double-counted, in FY2005 (settlement basis) we estimate that there was revenue of 279.3 trillion yen (US$2.3 trillion) and expenditure of 232.5 trillion yen (US$1.9 trillion)[8] (Fig. 4-2-4). Below, we use the term "consolidated national fiscal status" to refer to the total revenue and expenditure in the sum of the general account and the special accounts

8 Items in the Statement of Accounts are not listed entirely in detail, so it is not possible to rule out double counting. Therefore, this is an estimate.

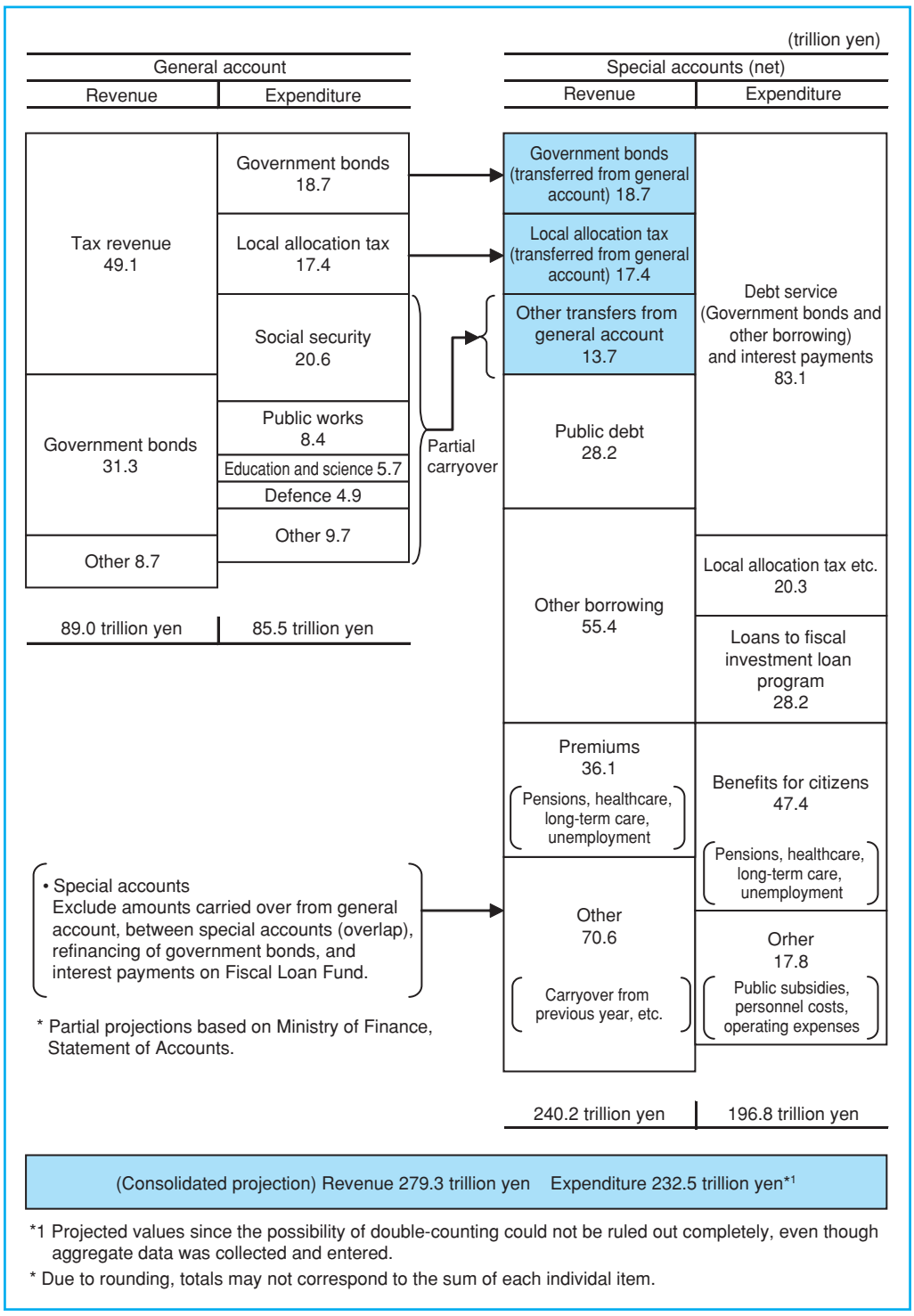


Fig. 4-2-4 FY2005 overall picture of consolidated national fiscal status (projected account settlement)

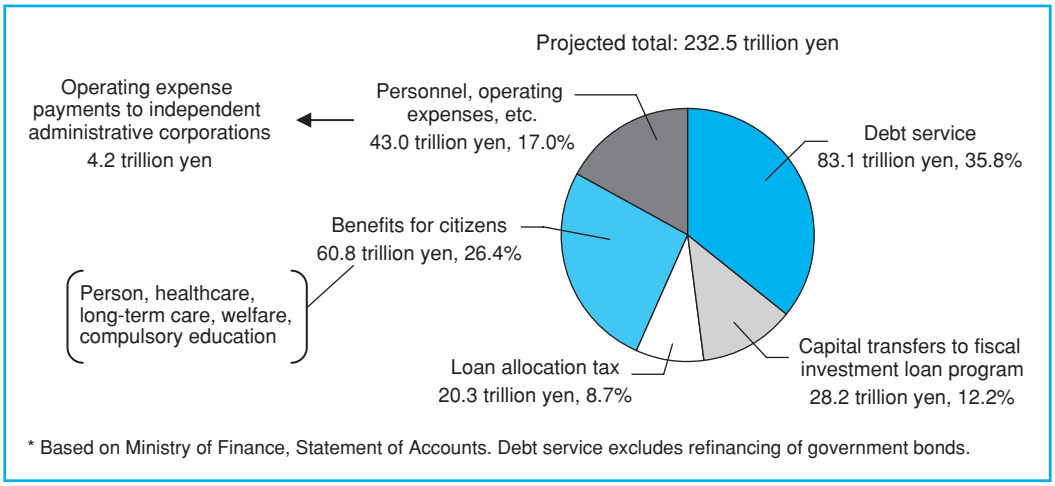


Fig. 4-2-5 Consolidated national fiscal status—Composition of expenditure (FY2005 settlement)

(excluding double-counted amounts).

A consolidated national fiscal status has the following problems.

First of all, the social security spending of 20.6 trillion yen (US$171.7 billion) in the general account is less than 10% of the estimated 232.5 trillion yen (US$1.9 trillion) in the consolidated expenditure. The amount spent on social security is quite low compared with the amount spent on debt repayment. Furthermore, as stated above, the share of debt due to public works is a significant part of the total debt.

Secondly, while it is being reported that social security spending is 40% of general expenditures, nearly 10% of general expenditures go to operating expense payments to independent administrative corporations (IACs), 4.2 trillion yen (US$35 billion) in FY2005[9] (Fig. 4-2-5). These expenditures are made to related IACs as part of social security spending and public works spending. These amounts are not necessarily clearly labeled as payments to IACs. Looking at the index of the settlement of accounts makes the limitations clear. Just as with Special Public Corporations, these payments seem to be cleverly obscured.

The third point is the amount of surplus funds and how they flow. Publicly released net amounts are available for the general account and special accounts on a settlement basis until FY2004. In that year, the difference between revenue and expenditure (surplus funds) was 45.8 trillion yen (US$381.7 billion).[10] This is a scale which would cover social security spending for two years.

The key issue is how these surplus funds flow. For example, the Foreign Exchange Funds Special Account issues Foreign Exchange Funds Bonds to borrow money for the purchase of foreign bonds. It produced 3 trillion yen (US$25 billion) in surplus funds in FY2005. Of this amount, 1.6 trillion yen (US$13.3 billion) was transferred to the general account, but 1.3 trillion yen (US$10.8 billion)[11] was held as a reserve fund for future purchases of foreign bonds. Because they increase debt, these funds should not be simply retained for future use. Instead, the entire sum should be transferred to the general account.[12]

Fourth, settlement of accounts is not valued in national fiscal policy. This is one of the reasons why huge amounts of surplus funds are generated. For example, in FY2005, the initial general account revenue based on the previous budget was expected to be 82.2 trillion yen (US$685 billion), and the whole budget was drawn up

9 Yumiko Maeda, "The Situation of Independent Administrative Corporations (2005 Fiscal Year Budget Statement) The Results of Koizumi's Administrative Reform" JMARI Working Paper No. 138, January 2007. (*J*)

10 Ministry of Finance, "Fiscal Policy Statistics 2006, p. 221. (*J*)

11 Figures do not match due to rounding.

12 The Abe Cabinet has recommended a reform that would allow surplus funds from the Special Accounts to be transferred to the General Account, but this must be closely watched.

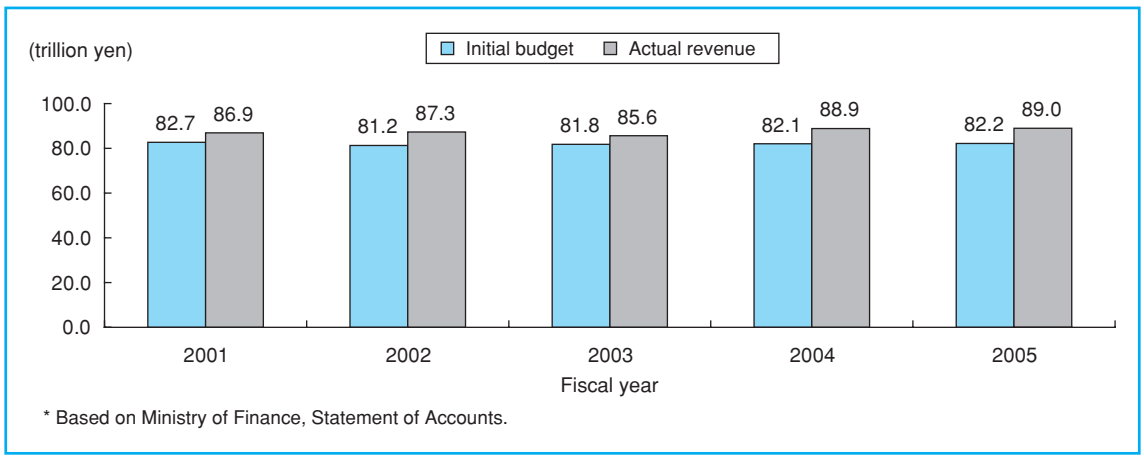


Fig. 4-2-6 Trends in budgeted and actual revenue in the general account

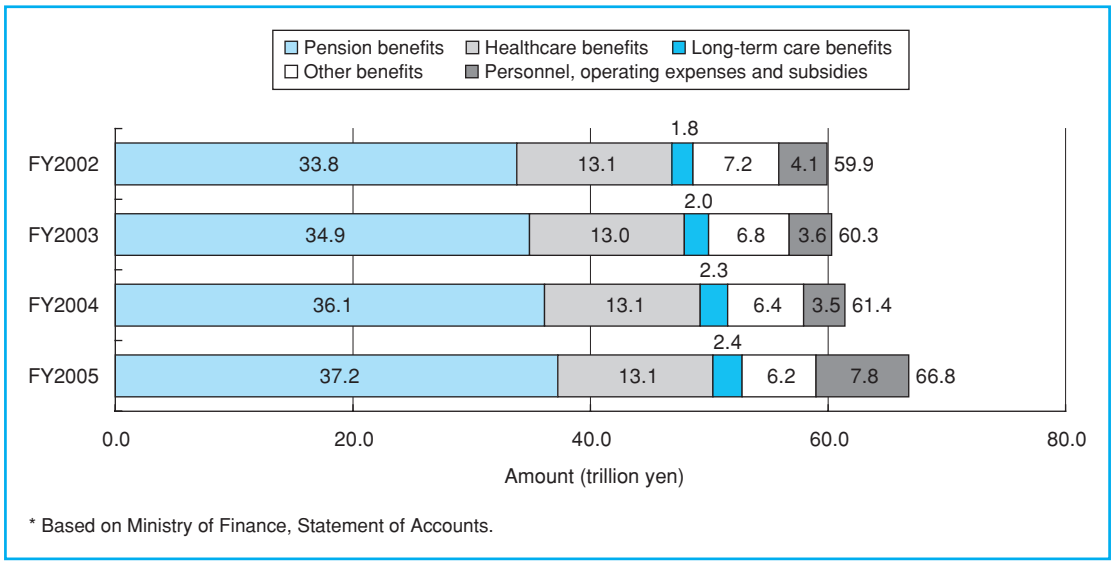


Fig. 4-2-7 Composition of consolidated social security spending (projected)

within this limit. When we look at the settlement of accounts, however, even in FY2001 revenue had exceeded 85 trillion yen (US$708.3 billion), and by FY2005 it had reached 89 (nearly 90) trillion yen (US$741.7 billion (nearly US$750 billion)) (Fig. 4-2-6). Instead of being based on real conditions, the budget was drawn up with overly low spending, and as a result the environment of cost containment was intensified.

The reality is that support payments to IAOs are secure and the consolidated national fiscal status contains a sizable surplus.

We would like to propose that as a first step a realistic budget be drafted based on a settlement of accounts. Next, payments to IAOs and other related organizations should be clarified and reduced. Then, the past legacy due to public works projects should be completely paid off. The system of special accounts should in principle be abolished, and any surpluses produced by those special accounts that remain should be put back into the general account. There are many such measures that should be undertaken and completed before revising social security spending.

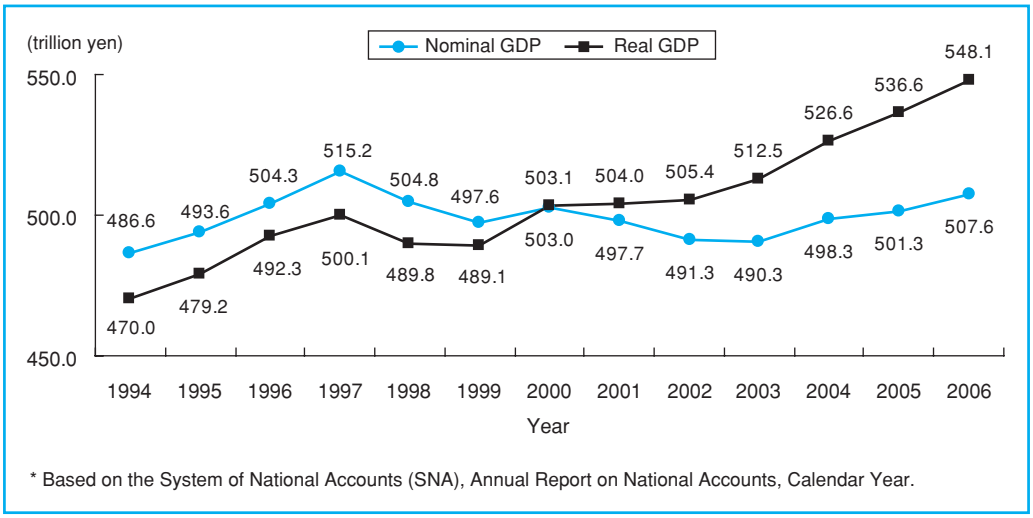


Fig. 4-3-1 Trends in nominal GDP and Real GDP

(3) Consolidated social security spending

Consolidated social security spending is estimated to be a total of 66.8 trillion yen (US$556.7 billion), if the general account and the special accounts added together, and double-counted amounts excluded (Fig. 4-2-7).

Looking at the breakdown of consolidated social security spending, pension benefits have increased consistently in the past four years. Healthcare spending has been flat.

For example, when the co-payment for insured persons was raised from 20% to 30% in FY2003, share of national government subsidy in healthcare benefits decreased. Since October 2002 the share of public subsidy in geriatric healthcare spending was increased, while the cross-subsidy from other health insurance programs was decreased, and this decrease nearly balanced out the increase in national government subsidy for geriatric healthcare spending. Furthermore, in FY2005 part of the national government subsidy for Municipal Managed Health Insurance was shifted to prefectural governments. This was a transfer of about 545 billion yen (US$4.5 trillion) in tax revenues.[13]

In this way the share of national government subsidy in healthcare benefits was contained relatively effortlessly.

In pension finance, reserves in FY2005 were 141.4 trillion yen (US$1.2 trillion) (131.4 trillion yen or US$1.1 trillion in the Employee Pension Insurance System, and 10 trillion yen or US$83.3 billion in the Municipal Pension System). It should be remembered that pension reserve funds are a secure fiscal resource.

3. Creating New Fiscal Resources

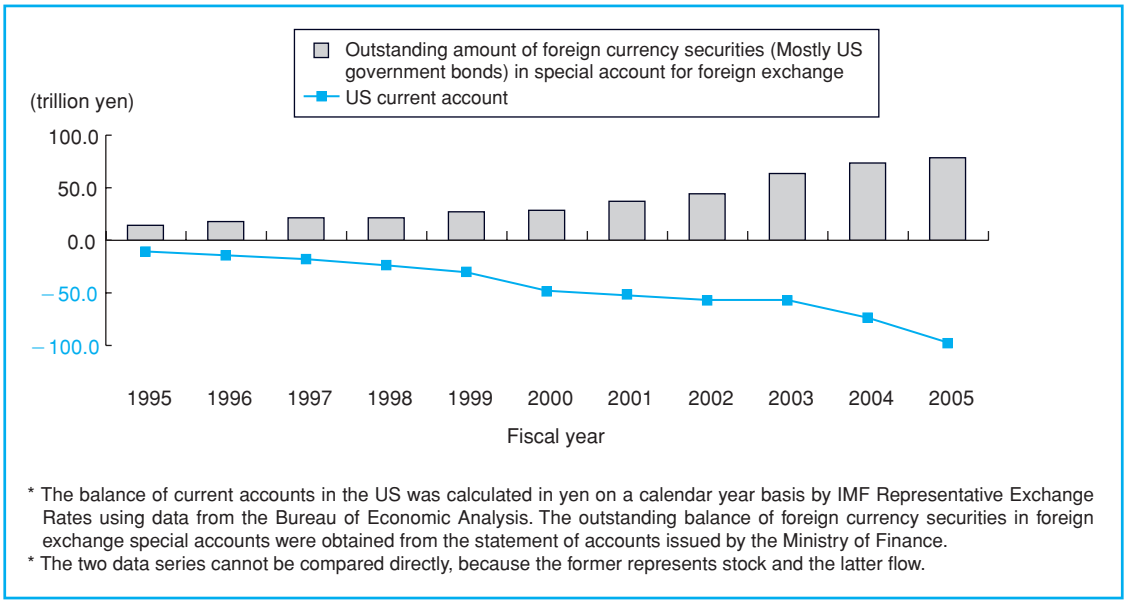
(1) The consequences of relying on foreign demand

After the bubble burst,[14] until 1997, Japan's nominal GDP soared each year. Afterwards, there were short contractions, but after 2004 growth began to increase again. Furthermore, real GDP (not accounting for price changes including recent deflation) also increased dramatically after 2000, meaning that real economic growth occurred (Fig. 4-3-1).

But the growth in GDP was not connected to an expansion in social security benefits for the people of Japan. The reason for this is that Japan relied on foreign demand.

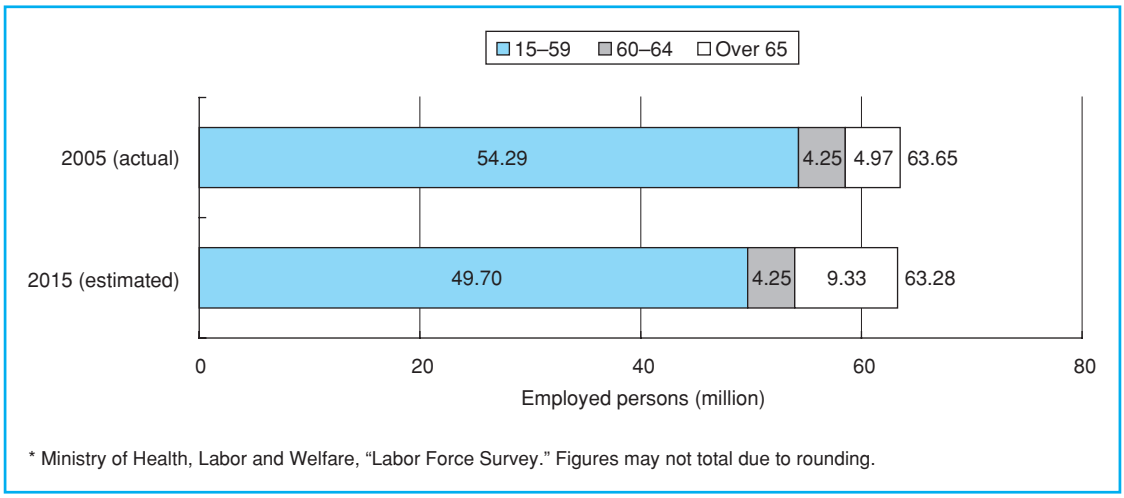
Japan's current account balance has always had a surplus. Japan accepts dollars for its exports. Corporations place dollars in bank accounts or

13 MHLW, "Strengthening the Role of Prefectures in Municipal Managed Health Insurance," (*J*) Materials prepared by the Insurance Bureau for the 2005 National Conference of Division Heads and Directors General in charge of Health, Labor and Welfare.
14 The end of the bubble is defined here as after the start of the first Gulf War in January 1991.



* The balance of current accounts in the US was calculated in yen on a calendar year basis by IMF Representative Exchange Rates using data from the Bureau of Economic Analysis. The outstanding balance of foreign currency securities in foreign exchange special accounts were obtained from the statement of accounts issued by the Ministry of Finance.
* The two data series cannot be compared directly, because the former represents stock and the latter flow.

Fig. 4-3-2 Outstanding amount of foreign currenty securities and US current account



* Ministry of Health, Labor and Welfare, "Labor Force Survey." Figures may not total due to rounding.

Fig. 4-3-3 Estimate of labor force—Case where employment extended to 69 years old

investments, and financial institutions convert them to yen. The dollars held by the financial institutions are bought by the government and the Bank of Japan. But domestic social security benefits cannot be paid in dollars. Domestic surpluses of dollars are used up in purchases of US government bonds. In other words, the dollars stay in the United States, or flow back to the United States, and the fiscal deficit is converted into expanded consumption (see Fig. 4-3-2).

At the same time, hard-earned Japanese output cannot return to Japan. Furthermore, because of the dependence on foreign demand, there is always a fear of a higher-valued yen, which requires the stockpiling of massive foreign exchange assets to promote a weaker yen.

If Japan can eliminate its reliance on foreign demand, then it will be possible to end dependence of foreign currency. If we can bring the surplus back to Japan that is currently flowing

Table 4-3-1 Composition of government spending in major countries (share of nominal GDP, 2002)

(Share of nominal GDP for each item, %)

	Japan	UK	France	Germany	Italy
General services and public order	5.5	9.2	10.7	9.1	12.4
Economy and public works	7.6	3.6	7.0	5.8	4.9
Culture and education	4.7	5.8	6.8	4.9	5.8
Healthcare and social security	20.4	23.2	29.0	29.0	25.0
Total	38.1	41.8	53.4	48.7	48.0

(Notes) 1. Based on data from OECD "General Government Accouts."
2. Subcategories are based on System of National Accounts (SNA) as follows:
General services ; General public services, defense, public order and safety
Economy and public works ; Economic programs, environmental protection, housing and regional amenities
Culture and education ; Entertainment, culture, religion and education
Healthcare and social security ; Same as on the left
3. The United States is excluded because it does not adopt SNA categories.

* Source: Office of the Prime Minister, Fiscal and Economic Report, July 2005.

overseas, we can increase consumption. This will then lead to a transformation that expands domestic demand.

(2) Proposal for expanding domestic demand

Japan is facing a critical situation in which the labor force is shrinking due to the aging society with a low birthrate. But the next few years when the "baby-boomer generation"[15] begins to retire will also be an opportunity to expand domestic demand.

In FY2005, Japan's labor force was 63.65 million people (Fig. 4-3-3). 4.37 million people were between the 60 and 64 years old (51% of the age cohort).[16] There were 4.97 million people 65 years and older in the workforce (19.3% of the age cohort).

According to MHLW's "Survey of the Elderly in the Workforce 2004," 70.5% of men and 46.8% of women between 65 and 69 years old were either employed or interested in being employed.

We can estimate the future size of the labor force by assuming that 10 years from now, the retirement age will be raised by 5 years, and the employment rate for people between 65 and 69 years old will be the same as the current employment rate for people between 60 and 64 years old. We estimate that the total labor force will be 63.28 million people in 2015, about the same level as in 2005. The number of people in the labor force does not include unemployed persons, so if we can reduce the unemployment rate, we can expand the labor force even further.

Even if companies do not raise their mandatory retirement age, support for entrepreneurs to start businesses would be sufficient. Japan's baby-boomer generation has long and multifaceted technical experience throughout the period of high-speed economic growth in Japan. It would be possible to put that technical experience to use in the areas where Japan faces its main problems today: energy, food, healthcare, long-term care, and welfare services. The resulting employment creation would likely increase domestic demand and government revenue.

Japan's baby-boomers will reach age 65 in 2012. In the future, we should endeavor to be able to look back on that date as the point at which Japan's aging society with a low birthrate began another industrial transformation.

(3) Our goal: To establish a more adequate social security system

Compared with other advanced industrialized nations, Japan's government spending is small overall; health and social security spending is especially low, while spending on economic

15 Generally known as the generation born between 1947 and 1949.
16 The sample is the entire population from MIAC, "2006 National Census." The population for which age was undetermined was distributed into each age group.

stimulus and public works is relatively large (Table 4-3-1).

Unpaid labor in the household has flowed to the regular labor market in these past few decades. The general social structures supporting individuals and families have become more important. In order to respond to these changes in economic and family structures, Japan must set the goal of creating an adequately large social security system.

Our proposed reform of national government spending is one step toward this goal. Our main goal is to develop reforms to handle the costs of social security in the future. Social security spending should not be cut simply for financial reasons. As we have stated, and as shown by the levels of spending for economic stimulus and public works, there are other areas which should be cut instead of social security.

It is also necessary to take steps to create new fiscal resources. Expansion of employment is one action that should be taken. This does not just mean employing more elderly people; securing employment for young people and women is also an important issue, and supportive systems are essential.

We strongly believe that the establishment of an appropriate and sufficient social security system will ensure our well-being in the future.

A Human Rights Perspective on Infectious Disease Laws in Japan

JMAJ 50(6): 443–455, 2007

Eriko SASE,*1 Sofia GRUSKIN*2

Abstract

This article examines infectious disease laws in Japan from a human rights perspective using international standards.

Background In public health, frameworks and assessments integrating human rights concerns are beginning to be developed. One challenging area is infectious disease control where human rights offer and approach for addressing the rights and health of infected and vulnerable populations.

Methods We examined the jurisdictional transformation of human rights concerns in infectious disease laws through chronological and conceptual analysis. In particular, we looked at relevant laws with special attention to the recently amended Infectious Disease Prevention Law by focusing on HIV/AIDS and tuberculosis.

Results Attention to human rights in infectious disease laws in Japan has improved. This may partially be the result of (1) attention to international norms and standards, and (2) civil society efforts to advocate for the rights of infected and vulnerable populations.

Conclusion Three prime areas remain challenging: (1) inclusion of infected and vulnerable populations in decision-making concerning relevant law and practice, (2) attention to the health and rights of health professionals, and (3) accurate criteria for restricting the rights of infected and affected populations. Consideration of international standards and approaches in these areas could facilitate a well-balanced health and human rights perspective to infectious disease control.

Key words Human rights, HIV/AIDS, Tuberculosis, Infectious Disease Prevention Law, Japan

Introduction

Human rights

Human rights are legally guaranteed internationally and in the national laws of governments, protecting fundamental freedoms and the human dignity of individuals and groups.[1,2] Governments are obliged to respect, protect, and fulfill human rights.[3,4]

International human rights law was developed principally after World War II. A large number of human rights related treaties, declarations, and legal instruments with implications for health have been promulgated globally. The United Nations (UN) adopted and proclaimed the Universal Declaration of Human Rights in 1948.[1] Two major international human rights treaties were created in 1966; the International Covenant on Economic, Social and Cultural Rights (ICESCR),[5] and the International Covenant on Civil and Political Rights (ICCPR).[6] Japan ratified these two treaties in 1979 as well as the six other major human rights treaties by October 2007. A number of international bodies exist to support governmental compliance with their human rights obligations and most recently, in June 2006, the UN established the Human Rights Council to

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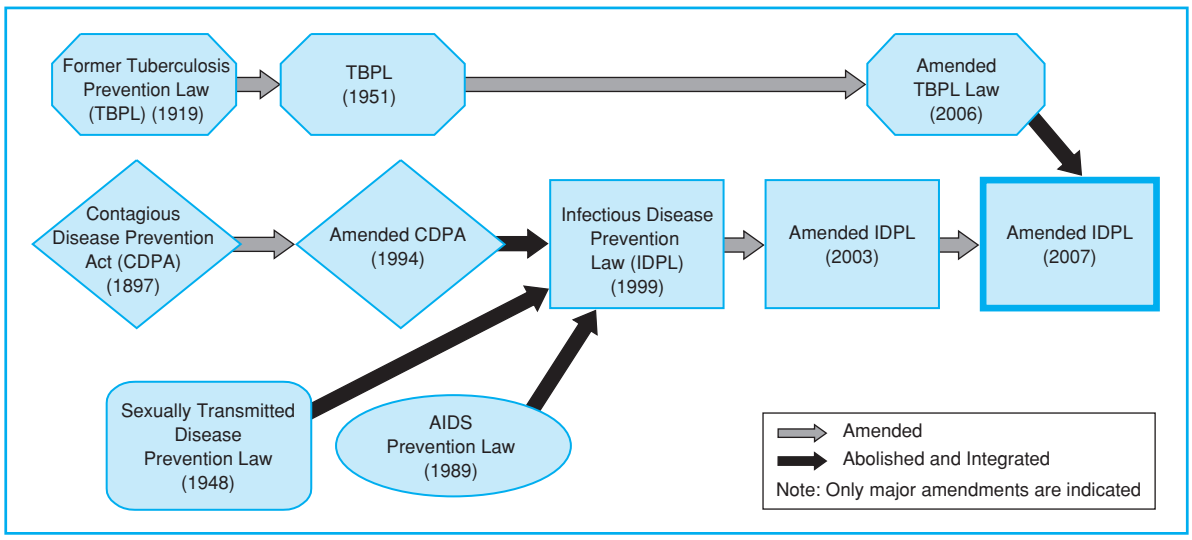

Fig. 1 Jurisdictional transformation: Major infectious disease related laws in Japan

promote and encourage respect for human rights and fundamental freedoms.[7]

Human rights in global health

In the context of health, human rights have been progressively promoted at the global level.[8–10] The World Health Organization (WHO) affirmed "the right to the highest attainable standard of health" in its 1946 Constitution.[11] The concept was developed over half a century with "health for all" (1978),[12] "health promotion" (1986),[13] "health promotion in the 21st century" (1998).[14] The right to health also exists in many health specific documents and declarations.

Governments have a responsibility to deliver essential health and social services, and to enable people and their families to achieve better health by respecting human rights, which are a prerequisite to health and wellbeing.[10] Framework and assessment methodologies to include human rights concerns in health are increasingly being developed by the international community.[8,15,16] Governmental obligations include the obligation to respect, protect, and fulfill human rights. A "rights-based approach" is a process that uses human rights as an integral dimension of the design, implementation, monitoring, and evaluation of health-related policies and programs.[17] In particular, attention is given to the principles of non-discrimination, participation, transparency, and accountability. Increasingly, governments have understood that the promotion and protection of human rights in the context of public health is not only a legal obligation but can also make their policies and programs more effective.

Since the 1980s, the global pandemic of HIV/AIDS has raised awareness of the rights of infected and vulnerable populations in global health.[3] Infectious disease control is a challenging area for considering the rights of infected and vulnerable populations.

Human rights and public health in Japan

In 2001, an epoch-making event occurred regarding human rights concerns in Japan's public health policy. The Japanese court ordered the government to award compensation to former leprosy patients. The Leprosy Prevention Law (Law No. 214: 1953–1996), which was based on patient isolation in the 13 national leprosaria, was found to be a violation of the human rights of leprosy patients.[18] Later, compensation was also awarded to those claiming maltreatment[19] while isolated in the overseas leprosaria built by the Japanese government during the colonial period.[20]

Along with this case, concerns for the human rights of people living with HIV/AIDS (PLWHA), the potential threat of the use of infectious disease pathogens for world terrorism, and the outbreak of emerging infectious diseases, e.g., severe acute respiratory syndrome (SARS) and the H5N1 strain of flu, have all raised awareness of the role

of human rights in public health considerations.[21]

Jurisdictional transformation in Japan: Infectious disease related laws

Perhaps as a consequence, the structure of infectious disease related laws has been drastically transformed in the last decade (Fig. 1). The aims are to strengthen surveillance and prevention on the one hand, and on the other to promote a human rights perspective in infectious disease control.[21] Japan has been observing the continuous increase of PLWHA from the mid-1980s, and the plateau prevalence of TB. These two infectious diseases are targets of the UN Millennium Development Goals[22] and of direct concern to Japan.

Epidemics of HIV/AIDS and TB

HIV/AIDS: The human immunodeficiency virus (HIV) causes acquired immune deficiency syndrome (AIDS), which was first recognized in 1981 in the United States.[23] In the world, 39.5 million people were estimated to be living with HIV/AIDS in 2006.[24]

In Japan, 1,358 PLWHA were newly reported in 2006, with a 13% increase from the previous year, a consecutive 3-year growth.[25] The cumulative number of PLWHA in Japan was estimated to be 12,394 by the end of 2006.[26] Although the estimated HIV infection rate among its population is under 0.1%, Japan is experiencing an increase in PLWHA since the first reported AIDS patient in 1985.[25] Specialists note that HIV/AIDS in Japan is shifting from a concentrated to a generalized epidemic and advise that more resources need to be invested in prevention.[27] In terms of related laws, the AIDS Prevention Law (Law No. 2: 1989) was integrated into the Infectious Disease Prevention Law (Law No. 114: IDPL) in 1999 (Fig. 1).

TB: TB is an infectious disease that spreads through the air. People who are sick with TB in their lungs are infectious.[28] The WHO declared TB a Global Emergency in March 1993. In 2005, it was estimated that globally 8.8 million people were newly infected with TB and 1.6 million people died by it.[29]

In Japan, TB was the top cause of death in the 1930s and 1940s and remained a high-prevalence disease until the 1950s.[30] The prevalence was lowered to 33.7/100,000 in 1996.[31] However, in 1997–1998, Japan experienced the first rise in TB patients (34.8/100,000) after having decreased for four decades. Thus the Japanese government declared a national TB emergency in 1999.[32] Currently, Japan remains as a middle TB-prevalent country. The TB prevalence (17.2/100,000) in 2006[33] was approximately two- to three-fold of that of other developed nations. With respect to relevant laws, the TB Prevention Law (Law No. 96: 1951) was amended in 2006 and integrated into the IDPL in April 2007 (Fig. 1).

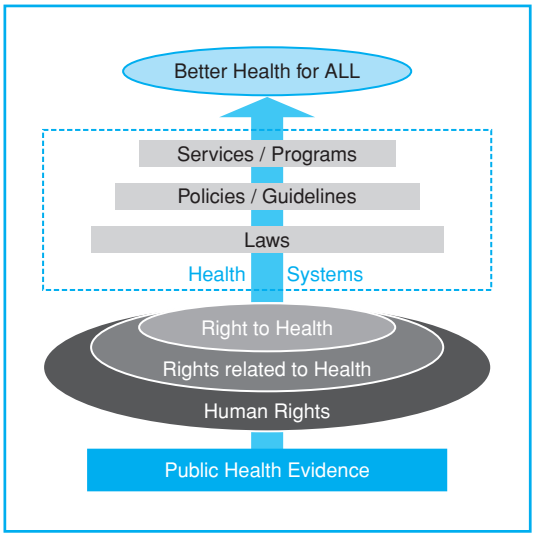

Fig. 2 Integration of human rights to improve health

Study objectives

Given the rising HIV and TB prevalence in Japan, jurisdictional transformation is taking place alongside elevation of human rights concerns. We therefore examined the concepts and implementation of a human rights perspective in the scope of infectious disease control in Japan by focusing on HIV/AIDS and TB related laws in relation to international standards.

Methods

Conceptual framework: Human rights integration to improve health

We designed a conceptual framework, which illustrates the integration of human rights to improve health (Fig. 2). Human rights are understood here to include "rights related to health" and the "right to health." "Rights related to health" include: the rights to food, housing, work, edu-

cation, human dignity, life, non-discrimination, equality, prohibition of torture, privacy, access to information, and the freedoms of association, assembly, and movement. These and other rights and freedoms address integral components necessary for achievement of the right to health.[34] The "right to health" directly involves the underlying determinants of health and the delivery of health care services. Within health systems, laws determine policies such as those relating to infectious disease control, which set specific guidelines that encompass service and programs delivered to accomplish "better health for all."

Analysis

1. Chronological analysis: 1897 to 2007

A two-tiered methodology was used for the examination. First, we performed a chronological analysis to investigate the development of concepts and application of human rights to Japan's infectious disease control in relation to international standards. We examined the changing status of the epidemics, human rights related laws of Japan and the world, as well as related health policies, and programs from the approximately 100 years since the first related law, the Contagious Disease Prevention Act (Law No. 36), was enacted in 1897.

2. Conceptual analysis

Second, we conducted a conceptual analysis to examine the development process and relation of the themes. This method[17] allows the analysis of complex situations of broadly conceived inquiry. We investigated how governmental obligations regarding human rights protection are embedded in HIV/AIDS and TB related laws in Japan. Analysis was conducted of: academic papers, laws, policies and guidelines, government and non-governmental organizations' programs, public reports and minutes, and media reports. For the governmental materials at the national level, we also examined the minutes issued by the Ministry of Health, Labour and Welfare, the Ministry of Justice, the Ministry of Education and Science, the Management and Coordination Agency, and the General Administrative Agency of the Cabinet in Japan. At the local level, we studied the disclosed information of prefectures and municipalities as well as the health care centers posted in prefectures, municipalities, and ordinance-designated cities.

Results

The jurisdictional transformation incorporating human rights protections in HIV/AIDS and TB related laws in Japan is shown (Table 1 and 2). Specific articles within the relevant law are displayed with regards to their positive and negative aspects from a human rights perspective. In this section, notable issues are summarized from a rights perspective according to each disease.

Governmental Obligations regarding Human Rights: HIV/AIDS related laws

Jurisdictional transformation

The AIDS Prevention Law (1989) was the first law promulgated to control HIV/AIDS in Japan. In 1999, it was abolished and integrated into the IDPL along with the Sexually Transmitted Disease Prevention Law (Law No. 167: 1948) and the Contagious Diseases Prevention Act (1897). Most of the articles related to HIV/AIDS control were inherited to the Amended IDPL in 2007 (Fig. 1).

Positive aspects

Human rights protection

The 1989 AIDS Prevention Law obliged the state to consider human rights protection for patients (Art. 2-3) as did the 1999 IDPL (Art. 2, 3-1). The Amended IDPL (2007) goes a step further in obligating national and local government authorities to respect the human rights of patients (Art. 2, 3-1).

Abolishment of mandatory name reporting: The 1989 Law stated that physicians shall send an alert notice to the governor with the names and addresses of infected people who are non-compliant and suspected of infecting others (Art. 7-1), and of people who have had contact with infected person(s) and are suspected of doing the same (Art. 7-2). On the positive side even at that time, physicians were advised to protect the privacy of those whom they report by making a confidential notice to the governor.[35]

HIV/AIDS was designated as a Category-4 disease in the 1999 IDPL, and a Category-5 disease in the 2007 IDPL. As diseases in these categories are the target of surveillance only, the alert notice system was abolished in 1999. The surveillance report written by a physician to the governor contains; the patient's age, sex, nationality, and cause of infection (Art. 5 in 1989; 12 in 1999). In

Table 1 Governmental obligations regarding human rights protection: HIV/AIDS related laws

AIDS Prevention Law (1989)	Infectious Disease Prevention Law* (1999)
Objectives: To enhance and advance public health by preventing an HIV/AIDS epidemic	To prevent the emergence of infectious diseases (IDs) and epidemics by establishing necessary measures for ID patients and prevention
Disease Classification: None	Category-4 (out of 4)
<Immediately relevant articles (Article number)>	
• Promotion of accurate knowledge regarding AIDS through educational activities (2-1)	• Enhancement of accurate knowledge on ID through educational activities and public relations (3)
• Collection of AIDS-related information and promotion of research (2-2)	• Collection, analysis, and provision of ID-related information (3)
• Consideration for human rights protection for patients (2-3)	• Recognizing the patient's situation and consider his/her human rights (2, 3)
• National and local government cooperation for implementation of the HIV preventive measures (2-4)	• Ibid. (3) • International collaboration (3)
• Citizens' duty not to violate the human rights of patients (3)	• Citizens' duty to obtain accurate knowledge on IDs, be alert to prevention, and not to violate the human rights of patients (4)
• Physicians' cooperation with prevention efforts (4)	• Health professionals' collaboration with prevention (5-1)
—	• Promotion of research, advancement of testing ability, and education of human resources (3)
—	• Provide good quality of care for the ID patients (3)
—	• National government's support for local governments in technology and finance (3)
• Report of the age, sex, and address of patients by a physician to the governor within 7 days (5)	• Ibid. (12)
• Ban on "HIV infecting activities" by infected people (6-1)	—
• Compliance of infected persons with the physicians' order (6-2)	—
• Alert notice to the governor with the names and addresses of non-compliant patients or people whom a physician suspects of infecting people with HIV (7-1, 2)	—
• Governor's advice to test reported vulnerable individuals during a certain period (8-1)	—
• Governor's order of health examination to those who are non-compliant with the above advice (8-2)	—
• Governor's instruction on prevention of HIV infection to the reported people/guardians (9)	—
• Questioning reported patients/guardians regarding necessary information (10-1)	**• Questioning and investigation of patients and concerned parties regarding necessary information (15-1)**
• Right to demand reinvestigation by the Minister (13)	• Ibid. (65)
• Imprisonment or fining of physicians, government employees, and professionals for disclosing patient information (14, 15)	• Ibid. (67–69)
• Fining of non-compliant patients for failing to obey governor's order of health examination (16-1)	**• Fining of patients in case of non-cooperation (69)**
• Fining of patients in case of false report when questioned (16-2)	• Ibid. (69)
—	• Ministers' and governors' obligation to provide preventive information (16-1)
—	• Minister's and governors' obligation to protect privacy (16-2)
—	**• Fining of physicians in failing to report regarding the health status of patients (69-1)**

* When the Law was amended in 2007, most of HIV/AIDS related articles were carried forward.
Bold letters = Possible infringements on the human rights of infected/vulnerable people.

Table 2 Governmental obligations regarding human rights protection: TB related laws

TB Prevention Law* (1951)	Amended TB Prevention Law (2006)	Amended Infectious Disease Prevention Law** (2007)
Objectives: Promotion of public welfare by preventing TB from harming individuals and society through TB prevention and dissemination of proper care	Ibid.	To prevent the emergence of infectious diseases (IDs) and their epidemics by establishing necessary measures for ID patients and prevention
Disease Classification: None	None	Category-2 (out of 5)
<Immediately relevant articles (Article number)>		
• Consideration of human rights protection for patients (2-1, 3-2)	• Ibid. (2-1)	• Promotion of comprehensive measures for ID prevention and care for patients with respect for their human rights (2)
• Provision of adequate care (2)	• Ibid. (2-1)	• Ibid. (3)
—	—	• Collection of ID- and pathogen-related information and promotion of research (3-3)
—	—	• Cooperation by patients and asymptomatic pathogen carriers relating to questioning and investigation (15-3)
—	• Enhancement of accurate knowledge on TB through education and public relations (2-1)	• Citizens' duty to obtain accurate knowledge on infectious disease (4)
—	• Collection, analysis, and provision of TB-related information (2-1)	• Ibid. (3)
—	• Promotion of research, advancement of testing ability, and education of human resources (2-1)	• Ibid. (3)
• Comprehensive measure by national and local governments for prevention and provision of adequate care (2)	• Collaboration of national and local governments for preventive measures (2-2)	• Ibid. (3)
—	• Promotion of research, advancement of testing ability, and education of human resources (2-3)	• Ibid. (3)
—	• International collaboration (2-3)	• Ibid. (3)
—	• National government's support for local governments in technology and finance (2-3)	• Ibid. (3)
—	• Physicians' cooperation for preventive measures, recognition of patients' situations, consideration for their human rights and provision of adequate care (3-2)	• Physicians' collaboration for preventive measures and recognition of the patient's situation, provision of proper care, and achieving patients' understanding by providing adequate explanations (5)
• **Governor's advice on testing of suspected people (5-1)**	• Ibid. (5-1)	• Ibid. (17-1)
• **Governor's authority to test non-compliant people according to the above advice (5-2)**	• Ibid. (5-2)	• **Governor can compel health officials to test the suspected people in case of non-compliance with above advice (17-2)**
—	• Governors' written report for above 5-2 measure (5-3)	• **Ibid. (17-3)**
• Disclosure of the test result per request from the immunized person (19-2)	• Ibid. (19-2)	• Disclosure of the test result per request from the recipient of health examination (53)
• Target persons' immunization (17-1, 2, 3)	• Ibid. (17-1)	—
• Governmental disbursement of benefit in case of occurrence of disability or death by immunization (21-2)	• Ibid. (21-2)	—
• **Physicians' report of patients** to the nearest health center within 2 days (22)	• Ibid. (22)	• **Physician's immediate report of the name,** age, sex, **occupation, and address of patients and asymptomatic pathogen carriers (12, 53-7)**

• Home visits for preventive and care instructions to registered patients (25)	• Home visits for DOTS*** for registered patients (25)	• Home visits for DOTS for registered patients (53-14)
• **Physician's order** of sterilization, **isolation**, or necessary measures to the patients/guardians (26)	• Physician's order of DOTS, sterilization, or necessary measures to the patients/ guardians (26)	• Physician's order of DOTS, sterilization, or necessary measures to the patients/ guardians (53-15)
• Governor's **ban on employment of patients (28-1)**	• Ibid. (28-1)	• Governor's restriction on work of patients and asymptomatic pathogen carriers for a designated period (18-2)
—	—	• Patient's/guardian's request for the confirmation of the end of restriction on work (18-3)
• Screening committee on the 28-1 decision (28-2)	• Ibid. (28-2)	• Screening committee on the 18-2 decision (18-5)
• Governor's consultation with the Labor Department chief at the local government level if a working ban is applied to health professionals (28-3)	• Ibid. (28-3)	—
• **Governor's order of hospitalization** (29)	• **Ibid.** (29)	• Governor's advice for hospitalization (19, 26-2)
—	—	• Screening committee on governor's advice of hospitalization, extension of hospitalization, or co-payment (24)
—	—	• Review of the extension of hospitalization every 30 days (20-2, 26-2)
• **Governor's order of** sterilization and necessary measures regarding the patients' residence, and **isolation of the patient** (30)	• Governor's order of sterilization and necessary measures regarding the patients' residence (30)	• Governor's order of sterilization and necessary measures regarding the contaminated area (27)
—	—	• Right to file a complaint by the inpatient/ guardian to the governor regarding the treatment (24)
—	—	• Right to demand reinvestigation by the inpatient/ guardian to the Minister regarding extended hospitalization (25-1)
• **Questioning of patients/concerned parties regarding necessary information (32-1)**	• **Ibid.** (32-1)	• **Ibid. (35-1)**
• The authority of questioning should not be interpreted as identical to the authority for criminal investigation (32-3)	• Ibid. (32-3)	• **Ibid. (35-3)**
• The composition of the screening committee is more than 5 persons from government and knowledgeable about TB (49)	• The composition of the screening committee is 3 persons knowledgeable about TB and from the non-medical profession (49)	• The composition of the screening committee is more than 3 persons knowledgeable about ID medicine or law, and from the non-medical or non-legal professions (24-1)
• Imprisonment or fining of physicians, government employees, screening committee members, and professionals for disclosing patient information (62)	• Ibid. (62)	• Ibid.
• **Fining of patients in case of false report when questioned (63)**	• Ibid. (63)	• Ibid. (77)
• **Fining of patients in case of interfering with or rejecting the measures given by the government (63)**	• Ibid. (63)	—
—	• Citizens' duty to obtain accurate knowledge on TB, be alert to prevention, and not to violate the human rights of TB patients (3)	• Ibid. (4)

* The original law was enacted in 1919.
** The TB Prevention Law was abolished and integrated into the Amended Infectious Disease Prevention Law. The disease classifications of HIV/AIDS and TB differ in the 2007 IDPL as do the measures.
*** Directly observed treatment, short-course.
Bold letters = Possible restrictions on the human rights of infected/vulnerable people.

cases where patients' information is disclosed, physicians, government employees, and related professionals may be sentenced to imprisonment or receive a fine (Art. 14 to 15 in 1989; 67 to 69 in 1999, 73 to 74 in 2007).

Abolishment of testing order: In the 1989 Law, the governor was to advise people who had been reported to be tested (Art. 8-1) and in the case of non-compliance, the governor could order the test be done (Art. 8-2). These articles were deleted in the 1999 IDPL.

Compliance: The 1989 Law stated two compliance rules for infected people: a ban on activities that risk infecting others (Art. 6-1), and mandatory compliance with the physicians' recommendations (Art. 6-2). The ban was abolished and patients' cooperation with the questions and investigations is requested in the 1999 and 2007 IDPL (Art. 15-2).

Right to appeal: People infected by or vulnerable to HIV/AIDS have had the right to appeal since the first law enacted in 1989 (Art. 13 in 1989; 65 in 1999).

Respect for the rights of infected persons: The 1989 Law obliges citizens not to violate the rights of infected and vulnerable populations (Art. 3). The 1999 Law was more articulate in stating citizens have a duty not to violate the rights of infectious disease patients (Art. 4).

Quality of care: Previous laws were silent on the point of quality of care, and the 1999 Law added the establishment of adequate care with good quality for infectious disease patients (Art. 3). This provision was carried forward to the 2007 IDPL (Art. 3).

Possible areas of concern

Questioning and fines: Since the 1989 Law, the governor has been empowered to question reported infected and vulnerable individuals or their guardians as deemed necessary (Art. 10-1). In the case of false answers, the person shall be fined (Art. 16-2). The 1999 IDPL and the 2007 Amended IDPL carry these articles (Art. 69 in 1999; 77 in 2007).

Government Obligations regarding Human Rights: TB related laws

Jurisdictional transformation

TB control initially started with the former Tuberculosis Prevention Law (TBPL; Law No. 26) in 1919. In 1951, it was fully revised (TBPL; Law No. 96) with the aim of promoting public welfare by preventing TB through prevention and the dissemination of proper care (Art. 1). After the amendment in 2006, the TBPL was abolished and integrated into the IDPL in April 2007 (Fig. 1). Hence, the objectives of the law changed accordingly (Table 2).

Positive aspects

Human rights protection

The 1951 Law and its 2006 revision obliged the state to consider the protection of human rights of patients (Art. 2-1, 3-2). The term respect appears clearly in the 2007 IDPL (Art. 2).

Abolishment of mandatory isolation: A physician and a governor had the authority to order isolation of patients (Art. 26, 30) under the 1951 TBPL. This provision was omitted in the Amended TBPL in 2006. A governor can advise hospitalization (Art. 19, 26-2) according to the 2007 IDPL. Instruction for directly observed therapy, short-course (DOTS) was also included from the 2006 Law (Art. 25 in 2006; 53-14 in 2007).

Abolishment of ban on employment: A governor could ban the employment of patients (Art. 28-1) in the previous laws. This adverse disposition was changed to a limitation, while the target was expanded to asymptomatic pathogen carriers in the 2007 IDPL (Art. 18-1).

Right to appeal: Prior to 2007, the right of appeal and of fair trial for vulnerable populations was not explicitly mandated. This occurred only when TB control was integrated into the IDPL (Art. 65).

Shortened hospital stay: Each of the earlier laws suggested a 6-month period of hospitalization (Art. 34). The 2007 IDPL states that hospitalization should be reconsidered every 30 days when advised hospitalization occurs (Art. 20-2, 26-2).

Respect for the rights of infected persons: The 2006 TBPL obliged citizens not to violate patients' human rights (Art. 3) as does the 2007 IDPL (Art. 4).

Independent review: The 2007 IDPL mandated law specialists, medical and non-medical professionals to be members of a screening committee (Art. 24-1), which reviews the governor's advice and any extension of hospitalization.

Possible areas of concern

Mandatory name reporting: As TB is an infectious disease, in human rights terms, some restrictions on rights may be permissible. Previously,

physicians were obliged to report the names and addresses of patients to the nearest health center (Art. 22). In the 2007 IDPL, TB is classified as a Category-2 disease, equivalent to SARS (Art. 53-7). Occupation or place of work of the patient has been added to the information (age, sex, and name) required for the surveillance report.

Questioning and fines: Questioning of infected populations has been lawfully allowed since the 1951 TBPL (Art. 32-1) through to the current 2007 IDPL (Art. 35-1). In the 2007 Law, assumed asymptomatic pathogen carriers may also be questioned. In case of false answers, fining of those questioned remains permissible (Art. 63 in 1951 and 2006; 77 in 2007).

Note: It is too early to fully judge the impact of the changes noted above with respect to the 2007 Amended IDPL, but these are areas that will require attention as they are implemented going forward.

Discussion

A Human Rights Perspective on HIV/AIDS and TB Related Laws

Achievements

Both HIV/AIDS and TB related laws have progressively moved towards protecting human rights in how they are drafted over the past decades, especially through the recent establishment and amendment of the IDPL. The preamble to the IDPL (1999), a comprehensive law for infectious disease control, recognizes the prejudice and discrimination against leprosy patients and PLWHA that occurred in the past and promotes learning from these lessons. The term respect was inserted into the wording of the law when amended in 2007. This is a significant advancement in infectious disease law. The Guideline for AIDS Prevention (2006) also added respect for the human rights of infected and vulnerable populations.[36] Similarly, the Guideline for TB Prevention sets up a comprehensive measure to respect the human rights of patients in September 2007.[37] We note two issues that might have influenced such development in Japan.

1. Attention to international norms and standards

The inclusion of human rights language occurred in the 1990s during a period where Japan was participating in international conferences on a range of health and development related issues, which included the promotion and protection of human rights as fundamental to the achievement of public health goals—most notably the 1993 International Conference on Population and Development and the 2001 UN General Assembly Special Session on AIDS. Additionally, Japan participated in the UN Decade for Human Rights Education (1995–2004)[38] that among other movements, resulted in the establishment of the Human Rights Education and Edification Policy (2004), which aims to reduce social prejudice and discrimination against certain groups including infectious disease patients.[39] Likewise, on the medical side, the Japan Medical Association released Guideline for Professional Ethics of Physicians (2004) that suggest prioritizing the rights and privacy of patients.[40]

2. Growing civil society efforts to advocate for the rights of infected and vulnerable populations

A human rights perspective suggests that the views of affected communities, including non-governmental organizations (NGOs), be taken into account in the development of all aspects of health policy and programming. Over the past decade, NGOs have increasingly come into existence advocating for the rights of PLWHA within Japan.[41,42] This, and other efforts from a growing civil society, may have helped to raise awareness among citizens, health professionals, and policy makers resulting in positive changes in law and practice.[36]

Challenges and suggestions

While infectious disease law has greatly advanced in the past years, three areas require attention in future efforts.

1. Participation of infected populations

Participation of infected, vulnerable and affected communities in public health decisions that concern them has been recognized as key from a human rights perspective but also in order to successfully achieve public health goals. Yet, it appears that inclusion of affected communities in legal and policy efforts in the HIV and TB arena has been minimal.

The UN proposes availability, accessibility, acceptability and quality as indicators related to the provision of health services under the "right to

health."[34] Attention to these issues as understood by affected communities may help in monitoring the impact of the new law and in determining its effectiveness, e.g. by participation of infected populations. Some issues for further attention in each category are noted below.

Availability of health care: HIV antibody tests are provided free of charge at 246 health centers,[43] and X-ray tests for TB are provided by schools for free and by medical facilities with a minimum of 95% coverage by the government (Art. 37-2 in 2007 IDPL). Further consideration to expand availability, e.g. the offer of voluntary HIV testing during weekends, might be promoted by incorporating the needs of vulnerable populations.

Affordability (a sub-concept of accessibility): The IDPL obliges the governments to shoulder a large part of the medical fees for diseases, including HIV/AIDS and TB. The Ministry of Health, Labour and Welfare annually allocates 8.3 billion yen (69 million US dollars) for HIV/AIDS measures.[44] National Health Insurance or Employees' Health Insurance covers 30% of HIV/AIDS-related medical treatment, e.g., anti-retroviral therapy (ART) that costs about 150,000 to 200,000 yen (1,250 to 1,700 US dollars) per person per month.[45] Similarly, the Ministry allocates 7.1 billion yen (59 million US dollars) for TB measures including DOTS.[44] Attention to whether the resources allocated are sufficient to ensure that the most vulnerable populations have access to the services they need could be useful.

Acceptability: A recent survey showed that nearly 30% of dental clinics and psychiatric departments in Japan are uncomfortable accepting patients with HIV/AIDS.[46] TB patients also have long been the target of discrimination in Japan[47,48] as in other nations.[49] While these are only a few examples, it appears that discrimination in the context of HIV and TB remains rampant. As the Japanese public health administration was originally established under the police system in 1893.[47,50] The 2007 IDPL and related laws may still not adequately protect the rights of infected individuals.

Quality of health care: ART (AIDS treatment) and DOTS (TB treatment), both of which are the highest standard of care, are provided in Japan. Attention to the extent to which the quality is the same throughout the country, to all populations in need, and in all facilities could help to ensure that the law and resources given to implement it are having their desired effect.

2. Protection for health professionals

Measures to support the rights and health of health professionals were little observed in the laws studied. Guidelines and preventive regimens are provided by the Ministry of Health, Labour and Welfare with an annual budget of 27 million yen (225,000 US dollars).[44] However, TB prevalence among nurses was 1.9 times higher, and among laboratory technicians was 1.2 times higher in hospitals with TB units than among the general public in 1992–1996.[51] Concrete efforts to determine why this is the case and to ensure the health and rights of health professionals may be necessary.

Additionally, approaches to ensuring the rights and health of health professionals suggests additional attention to the information and education provided to patients, as well as to their responsibilities once they are diagnosed with an infectious disease. This is an area that may require further study with due attention to the rights and health of all concerned. For example, the Center for Disease Control and Prevention in the United States gives a practical suggestion regarding patients' responsibility, i.e. to cover mouth/nose when coughing to prevent infection.[52] How this is actually communicated, understood and acted upon by infected persons requires further study.

3. Accurate criteria for restrictions on human rights

The legal ability to restrict the freedom of movement of infected and affected people exists in the laws studied. At a national level, it is likely to be grounded in the Constitution of Japan (1947) that guarantees the liberty of individuals unless it interferes with the public welfare (Art. 13). Under human rights law, the ICESCR (1976) also gives governments the right to take the steps they consider necessary for the prevention, treatment, and control of epidemic, endemic occupational and other diseases (Art. 12-2 (c)).[5]

The international community considers that such limitation must be a last resort even if for the protection of public health. The United Nations Economic and Social Council suggests such limitation to be valid only when all five criteria are met: the restriction must be; (1) in accordance

with the law, (2) a legitimate objective of general interest, (3) strictly necessary in a democratic society to achieve the objective, (4) not intrusive or unnecessarily restrictive, and (5) not imposed arbitrarily. This is indicated in the so-called Siracusa Principles.[53]

The 2007 IDPL states that the restrictions on the rights of infected and vulnerable people should rarely occur (Art. 22-2). The Ministry of Health, Labour and Welfare has newly published specific criteria for human rights restriction of TB patients in hospitalization and discharge in 2007.[54] Further attention to the internationally agreed-upon criteria might be a way at the national level to validate any restrictions in laws and practice on human rights considered necessary to prevent the spread of infectious disease.

Limitations of the study

This study analyzed only published materials. Unpublished materials on programs or services were outside the scope of this study. It has been only a few months between the enactment of the 2007 IDPL in April 2007 and the time this article was written. Further, the focus of this article is on the written law and not on its implementation. More achievements and challenges may be revealed as it permeates practice.

Conclusion

Attention to human rights in supporting infectious disease control efforts in Japan is progressing. Yet three prime areas remain challenging. First, participation of infected and vulnerable populations in this area was found to be low. Second, attention to the interactions between the health and rights of health professionals and of their patients requires further exploration. Third, accurate criteria for the restriction of rights of infected and affected populations are not yet apparent in the laws or in how they are to be implemented.

Consideration of international standards in these areas, such as the rights-based approach promulgated by the UN and the Siracusa Principles, might facilitate development of a well-balanced health and human rights perspective in infectious disease control. In 2006, Japan was elected to be one of 47 members of the United Nation's Human Rights Council.[55] As a leader in international cooperation, Japan is poised to demonstrate further accomplishments in the application of human rights concepts to its actions in public health, both in the country and abroad. This path could be an example to other nations.

Note: Official names of the studied laws are as in follows.

- AIDS Prevention Law: Law concerning the Prevention of Acquired Immunodeficiency Syndrome (Law No. 2; 1989)
- Infectious Disease Prevention Law: The Law concerning the Prevention of Infectious Diseases and Patients with Infectious Diseases (Law No. 114; 1999)

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Characteristics and Issues of Healthcare for the Elderly

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Abstract

In Japan, average life expectancy is 78.64 years for men and 85.59 years for women (2004 Abridged Life Table), with people 65 years old or older accounting for more than 20% of the total population. It is anticipated that by 2015 fully one-quarter of Japan's population will be over 65 years old. Such societal aging is not peculiar to Japan or a few industrialized countries in Europe and the US, but actually is more of a global phenomenon.

Although no one can escape the phenomenon of aging, the ideal of successful aging is to lead a full, healthy life and enjoy a long natural lifespan. Successful aging is the ultimate goal of geriatric medicine and practical healthcare for the elderly.

To reach this goal, it is important to provide high-quality healthcare services for the elderly by (1) developing methods for the diagnosis, treatment, and prevention of geriatric diseases through increased understanding of their nature, and (2) learning how best to care elderly patients with functional disorders.

Recent years have seen a new development in geriatric healthcare that includes an understanding of the importance of comprehensive geriatric assessment and geriatric syndromes, progress in geriatric research, establishment of more evidence in geriatric medicine, new approaches in drug therapy, and cooperation in the areas of clinical medicine, welfare, and long-term nursing care, as well as support following discharge.

This paper describes the main features and issues of healthcare for the elderly, based on the aforementioned new trends in this field of medicine.

Key words Healthcare for the elderly, Comprehensive geriatric assessment, Geriatric syndrome, Holistic medicine

Characteristics of Geriatric Care for the "Young-Old" and "Old-Old"

In the young-old years (65–74 years of age), signs of the body's aging become apparent, and the number of people who develop geriatric diseases increases. However, the percentage of people with functional disorders that affect their everyday life remains low, while many continue to be active and vigorous. Clinical strategies for these people are usually the same as those for young or middle-aged individuals, although it is necessary to carefully examine the general bodily functions of each person, with consideration given to individual variability. Individuals in this age group are able to play an active role in society and can thus be referred to as the "young-old."

In contrast, special approaches are often necessary in dealing with the "old-old" (aged 75–89 years) and the "extremely (super) old" (aged 90 years or older). Those in these age categories show more obvious signs of aging, and the prevalence of multiple diseases increases greatly. As functional capacities related to everyday living decrease, attention to maintenance of the individual's general physical functioning is no less necessary than that to the diagnosis and treatment of specific diseases. Therefore, the main target of geriatric medicine tends to be the old-old or the oldest-old, necessitating a comprehensive view of holistic medicine.

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For example, organ-specific approaches in diagnosis and therapeutics are not adequate in providing healthcare for the elderly; a broader view that covers general organ functions, physical functioning including activities of daily living (ADL), mental health, and the individual's social environment is necessary. This then points to holistic medicine. The holistic approach of course is important for the medical care of non-elderly patients as well. However, it is particularly important in dealing with elderly patients, and it is no exaggeration to say that geriatric care cannot be effective without this approach.

Characteristics of Geriatric Medicine

Pathogenesis and characteristics of geriatric diseases

Diseases among the elderly are classified broadly into two types: longstanding illnesses from younger days that have been modified by changes in organ function as a result of aging; and diseases that worsen markedly with aging and tend to be characteristic to the elderly. The latter are generally known as "geriatric diseases." Geriatric diseases are defined as diseases common among or characteristic to the elderly. However, geriatric diseases are not limited to those seen only in the elderly, as some people are affected by these diseases at a younger age. Typical geriatric diseases include osteoporosis, dementia, and atherosclerotic disease (particularly, cerebrovascular disorders).

Importantly, geriatric diseases not only determine the vital prognosis of the elderly patient, but also can cause functional impairment leading to disability or the need for nursing care, and eventually to a markedly deteriorated quality of life for the patient and his or her family. Unlike younger people, the elderly are likely to develop functional impairment on the basis of age-related physiological changes. Therefore, the care of elderly patients should be aimed at rehabilitating them into society while maintaining their remaining physical functional capacities. A helpful tool in pursuing this aim is the comprehensive geriatric assessment (CGA), described below.

Comprehensive geriatric assessment (CGA)

Lowering of physical functions necessary for daily activities is often observed in the elderly, and this makes a factor that determines the level of need for nursing care. Therefore, it is important in working with elderly patients to assess their functional capacity objectively and to work to prevent their decline while promoting improved functioning. Items to be assessed include ADL, intellectual functions, presence/absence of a depressive state, quality of life (QOL) or subjective wellbeing, level of independence, and volition. These parameters constitute the CGA of the elderly. Rubenstein et al.[1] demonstrated for the first time the usefulness of CGA for general management of the elderly, as well as its benefit in improving not only vital prognosis but also functional capacity. CGA also has been attracting a great deal of recent attention in Japan.

In the process of a CGA program, a team of health professionals that can include physicians, nurses, medical social workers (MSW), pharmacists, rehabilitation specialists such as physiotherapists and speech therapists, and dieticians hold regular conferences to discuss the patient's condition, treatment strategies, and policies of care, on the basis of medical characteristics, general functional capacity, and the socioeconomic features of the patient in question. In this manner, all aspects of rehabilitation, nursing care, and welfare, as well as medical care, are taken into the process of decision making, and the patient is supported toward discharge based on proper discharge planning . This work is valuable in that it is done in a coordinated manner. A detailed outline of CGA is presented in another article in this issue, "Comprehensive Geriatric Assessment and Team Intervention" (see page 461–466).

Concept of geriatric syndrome

It is obvious that determining the cause of disease and providing treatment to remove the primary cause are important in clinical medical practice. However, in elderly patients, symptomatic control rather than identification of the cause may be important when a particular series of symptoms are present. Geriatric syndrome is a group of clinical conditions that are common in old age and result from various causes. They tend to require a therapeutic approach to the conditions themselves rather than a causal approach, regardless of the cause(s). Typical of such conditions are mis-swallowing (dysphagia), falls, cognitive dysfunction, and urinary incontinence.

Dysphagia occurs in a variety of conditions

including cerebrovascular disorder, consciousness disturbance, Parkinson's disease, at the end stage of malignant disease, or in long-term bedridden patients with decreased ADL. Further, it may cause aspiration pneumonitis and diffuse aspiration bronchiolitis. Repeated pneumonitis hinders oral feeding and, therefore, seriously affects the patient's QOL, possibly resulting in prolonged hospitalization. Thus, the prevention of mis-swallowing and improvement of swallowing function leads to improvement in the vital prognosis and QOL of the elderly.

Falls, for instance, can be a result of various factors such as gait disturbance due to sequelae of cerebrovascular disorder or bone and joint disease, orthostatic hypotension, and side effects of tranquilizers. Falls may cause not only trauma but also cerebral hemorrhage or femoral neck fracture, eventually causing the patient to be confined to bed. Therefore, the prevention of falls is an important issue. In addition to causal treatment, important means include improvement of the living environment to prevent falls, assistance in walking, and the wearing of protectors to mitigate the impact of a fall and to prevent fracture.

Roles of Geriatric Healthcare in an Aging Society

Diagnosis and treatment of diseases common in the elderly

Osteoporosis, Alzheimer's disease, and atherosclerotic disease (particularly, cerebrovascular disorder) are typical geriatric diseases that characteristically deteriorate the QOL of elderly patients and interfere with successful aging. Establishing the pathogenesis and treatment of these diseases is, above all, the goal of the current practice of geriatric medicine.

It is also critical to accumulate evidence that can serve as the basis for the treatment of geriatric diseases. For instance, control of hypertension in the elderly requires an approach different from that used for younger hypertensive patients. More specifically, it is unclear whether the same criteria for the initiation of antihypertensive therapy or blood pressure control are applicable, and drugs should be chosen to maximize the benefit of antihypertensive therapy according to the condition of the individual patient. To this end, evidence to establish criteria for the initiation of antihypertensive therapy and the selection of proper drugs is necessary, and thus further clinical studies of hypertension in the elderly are required.

Spread of preventive medicine for geriatric diseases

Once a geriatric disease has occurred, it is usually very difficult to treat. The prevention of geriatric diseases is extremely important from the aspect of effective utilization of finite medical resources. For example, once compression fracture of the lumbar vertebra has occurred as a result of osteoporosis, there is no way to restore it to its former condition. Femoral neck fracture can be repaired by surgery, but substantial medical resources need to be utilized. To prevent osteoporosis, it is necessary to warn the younger generation of its risks and to promote aggressive prevention of the disease.

Like diabetes mellitus and hypertension, osteoporosis is a multifactorial disease that is derived from the mutual effects of genetic and environmental factors. Such risk factors have been demonstrated to include menopause, lack of physical activity, insufficient calcium intake, and emaciation. Studies on the genetic risk factors are in progress, and the accumulation of knowledge allows us to screen those at high risk, enabling more efficient prevention.

Yoneyama et al.[2] divided 470 institutionalized elderly subjects (mean age, 82 years) in geriatric health care facilities into two groups: those given or not given about 5 minutes of oral care (brushing, and plus sterilization with 1% povidone iodine if brushing was insufficient) after every meal, and followed them for 2 years with regard to the onset of pneumonia and death from pneumonia. Results showed that the incidence of pneumonia was 19% in the control group, but significantly lower, 11%, in the group with oral care. The mortality rate, which was 16% in the former group, decreased by more than twofold, to 7%, in the latter group. Interestingly, intellectual function as assessed by the Mini-Mental State Examination (MMSE) decreased by 3.0 points on average within 2 years in the control group, whereas the corresponding decrease was only 1.5 points in the oral care group, indicating significant inhibition of intellectual deterioration in the oral care group.

It is noteworthy that a simple oral-care procedure reduced the incidence of pneumonia by

nearly half and exerted a favorable effect on intellectual function in the elderly. This finding is also important from the viewpoint of medical economics, indicating a substantial reduction in medical care expenditures. It is also important to accumulate evidence for other geriatric diseases in a similar manner.

Establishment of a nursing care system for the elderly

The provision of nursing care for the elderly is an important issue, and one that is particularly critical for Japan, where society has aged, leading to a growing population of isolated elderly individuals. Nursing care for the elderly relies on the long-term care insurance system launched in April 2000. Several issues have cropped up in regard to this system, such as how best to separate health insurance coverage and long-term care insurance coverage and a larger-than-expected increase in the number of beneficiaries of long-term care insurance. A review of this system will be necessary in the future to obtain further improvement. It will be necessary to construct a framework of nursing care suitable for Japan's situation under the long-term care insurance system.

Discharge planning for the elderly

The disease spectrum of the Japanese population has changed as a result of a marked increase in the population of elderly citizens, particularly the old-old, and home care for patients with medical needs has become easier. Because of these changes, it is considered desirable for patients to lead an independent life at home and within the local community, despite the presence of disease. On the other hand, national medical expenditures now account for about 8% of national income and a marked increase in medical expenditures for the elderly has been noted. Therefore, the national government is promoting medical reforms, and early discharge is being encouraged through the differentiation of hospital functions and revision of medical treatment fees.

As a result of these reforms, the mean number of hospital days has decreased markedly, and transition from institutional care to home care is being promoted. These changes represent a dramatic alteration in the circumstances surrounding medical care practice. The changes in medical structure have caused numerous difficulties in the rehabilitation and discharge of elderly patients. For instance, with increasing reductions in the number of hospital days, many acute hospitals now are oriented toward early treatment and early discharge, resulting in serious problems with regard to the discharge of patients. In chronic hospitals, securing continuation of care to ensure that the patient maintains mental and physical functioning after discharge is an issue.

Under these circumstances, the need for discharge planning that ensures the patient an environment of adequate post-discharge treatment has become a widely recognized concern. Japan, like many other countries, has a rapidly growing need for medical support that is based on discharge planning that can secure a smooth discharge and good quality of post-discharge life, through the cooperation and networking of local medical facilities and the utilization of home-care measures such as home-visitation by nurses.[3]

The goal of discharge support is to provide the patient and his or her family with a favorable living environment that takes into account the medical and social situation of the patient, including his or her specific disease, ADL, family structure, and economic situation. Post-discharge support is closely related to the practice of home care. More specifically, a multidisciplinary team that includes physicians, nurses, MSWs, and so on, can support the patient in arranging the living environment and medical environment after discharge, by helping with discharge to another hospital, to a residential care setting, or to the patient's home as well as the use of long-term care insurance services, selection of a primary care physician, and communication with the physician.

Improvement of an education and research system for geriatric medicine

To promote advances in geriatric medicine, it is necessary to expand educational and investigative institutions that can nurture health professionals in this field of medicine. In this regard, although geriatrics departments in university medical schools have played a leading role, their numbers are insufficient because only 23 of 80 medical schools in Japan have such divisions. Geriatrics departments have been decreasing rather than increasing in recent years. The author has expressed his concerns about this decrease in an article submitted to the "My Perspective" column of the major newspaper, Asahi Shimbun. This article was carried by the morning edition of

the paper on April 25, 2006.[4]

One piece of good news is that the National Center for Geriatrics and Gerontology was set up as the sixth national center in March 2004. This institution is expected to take an active role as a high-quality research institute in the field of geriatric medicine. Furthermore, it is highly encouraging that a research center for gerontology (Endowed Research Department of Gerontology, The University of Tokyo, led by Prof. Hiroko Akiyama) was set up at The University of Tokyo in April 2006. It is hoped that courses or research units aimed specifically at geriatrics and gerontology will be established in the future in a number of universities and will develop outstanding resources that can play a leading role in the medical care of the elderly.

Conclusion

Characteristic features and future issues of healthcare of the elderly in Japan's aging society have been discussed. The system of geriatric medicine is based on extensive, advanced knowledge and skills with the aim of achieving successful aging. Diseases of the elderly characteristically cause the patient to require nursing care owing to functional impairment, resulting in a deteriorating vital prognosis and poor QOL. In closing, it should be emphasized that a holistic approach to the maintenance of functional capacity from the viewpoint of preventive medicine, as well as diagnosis and treatment of the disease, are important in treating the elderly.

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Comprehensive Geriatric Assessment and Team Intervention

JMAJ 50(6): 461–466, 2007

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Abstract

As people age, they tend to suffer from disease and various other age-related problems. Because the elderly generally have a variety of problems related to physical functioning as well as psychiatric, psychological, or socioeconomic issues, the conventional medical care model that focuses only on disease itself often fails to provide an adequate solution. A specific procedure oriented to the elderly is comprehensive geriatric assessment (CGA). CGA evaluates the extent of functional impairment of the elderly from the medical, social, psychiatric, psychological, and physical aspects, and allows multidisciplinary intervention by a team of health professionals that can include physicians, nurses, physiotherapists, pharmacists, dietitians, caregivers, and social workers. The reported advantages of CGA include a decrease in the number of admissions, reduced length of hospital stay, a decrease in the number of institutionalized elderly, improvement in activities of daily living (ADL), and early detection of dementia and efforts to halt its progress. However, inappropriate use of CGA and inappropriate selection of subjects can lead to failure in achieving a satisfactory result. In Japan, the introduction of government-sponsored long-term care insurance furthered the spread of the CGA concept. A deeper understanding of the need for multidisciplinary intervention based on the cooperation of the medical and nursing sectors is expected, with improved medical and nursing care of the elderly being the anticipated outcome.

Key words Elderly, Comprehensive geriatric assessment (CGA), Multidisciplinary approach, Activities of daily living (ADL), Long-term care insurance

Introduction

In 1964, Williamson et al., who examined elderly residents in Scotland, found that their family physicians did not have sufficient understanding of the patients' various problems, including impaired functioning in daily living, and noted for the first time the importance of comprehensive geriatric assessment (CGA).[1]

In Japan, a government-sponsored long-term care insurance system launched in 2000 directed the attention of general clinicians to the impaired functioning of the elderly. A person who receives benefits from long-term care insurance is required to obtain certification of their necessity from a physician. In the process of obtaining certification, the concept of CGA is incorporated in the core assessment of basic activities of daily living (BADL), instrumental activities of daily living (IADL), cognitive function, and abnormal behavior. In addition, it is also required that a description of functioning in daily living be provided in the attending physician's statement. Because of these changes, greater knowledge of functioning in daily living has become essential for the attending physician, and thus physicians' attention to this matter has increased. Further, from the fact that a number of recent reports have presented the results of evaluations of the intervention of nursing care or rehabilitation training in terms of CGA, it is expected that attention to CGA will increase in the future.

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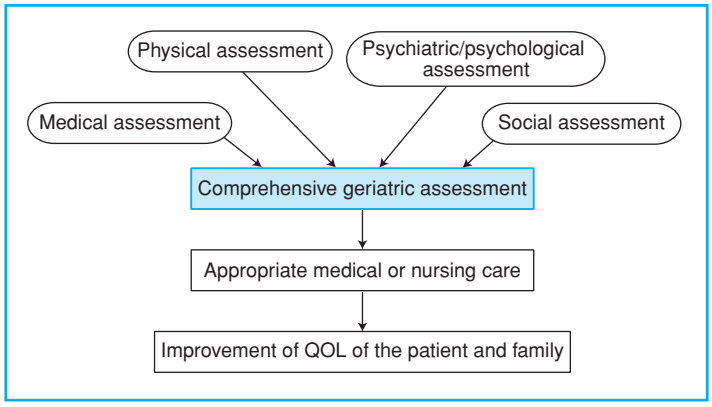
What is CGA?

CGA is a geriatric procedure in which a comprehensive evaluation including the medical, social, psychiatric/psychological, and physical aspects of an elderly individual with a disease or disorder is undertaken to determine the extent of the individual's impaired functioning in daily living (Fig. 1).[2]

Impaired functioning consists mainly of movement problems, urinary or fecal incontinence, dementia, unstable movement/falling, and communicative disorder (visual and hearing acuity, speech function, etc.).[3] Such impairments can result from a variety of causes, and the chronic process of the condition interferes with the independence of the elderly individual. Because of this, elderly individuals with impaired functioning tend gradually to become in need of long-term care.

Behind the growing need for CGA is the marked increase in the number of elderly patients with impaired functioning as well as the recogni-



(Excerpted from Nishinaga M. Japanese Journal of Geriatrics. 2000;37:859–865)

Fig. 1 Comprehensive geriatric assessment (CGA)

Table 1 Items and procedures of comprehensive geriatric assessment

(1) Basic activities of daily living (BADL)
Eating, bathing, dressing, mobility, walking to toilet, urinary control, etc.
→ Barthel index
→ Katz index
(2) Instrumental activities of daily living (IADL)
Telephoning, shopping, preparing meals, housekeeping, laundry, going out to nearby places, transportation, medication management, money management, etc.
→ Lawton
→ ADL-20, Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence
(3) Cognitive functions
→ MMSE (mini-mental state examination)
→ HDS-R (Hasegawa's dementia scale-R)
(4) Mood
→ GDS (geriatric depression scale), GDS15
(5) Communication: Visual and hearing acuity, swallowing
(6) Social environment: Home environment, caregiver, care and support system

(Adapted from The Japan Geriatrics Society ed. Geriatrics textbook (revised edition). Medical View Co., Ltd., Tokyo, 2002;153.)

tion that the conventional acute-disease model, which has been used for infections or other diseases, is no longer suitable in this situation. Therefore, a method of functional evaluation was required that would provide relevant information on the actual functioning of the elderly patient to the geriatric care professional, while being applicable to complex symptoms and patient needs related to disease or impaired functioning. In addition, a methodology for providing appropriate care to the patient according to his or her individual situation was also required.[3]

Fundamentals of CGA

CGA is a method used to assess impaired functioning that takes into account the following functions: physical, psychiatric/psychological, social, and medical. The elements of CGA include: 1) basic activities of daily living (BADL), 2) instrumental activities of daily living (IADL), 3) cognitive function, 4) mood, 5) communication (visual or hearing disorders), and 6) social environment (family environment, caregiver, care and support system, etc.) (Table 1).

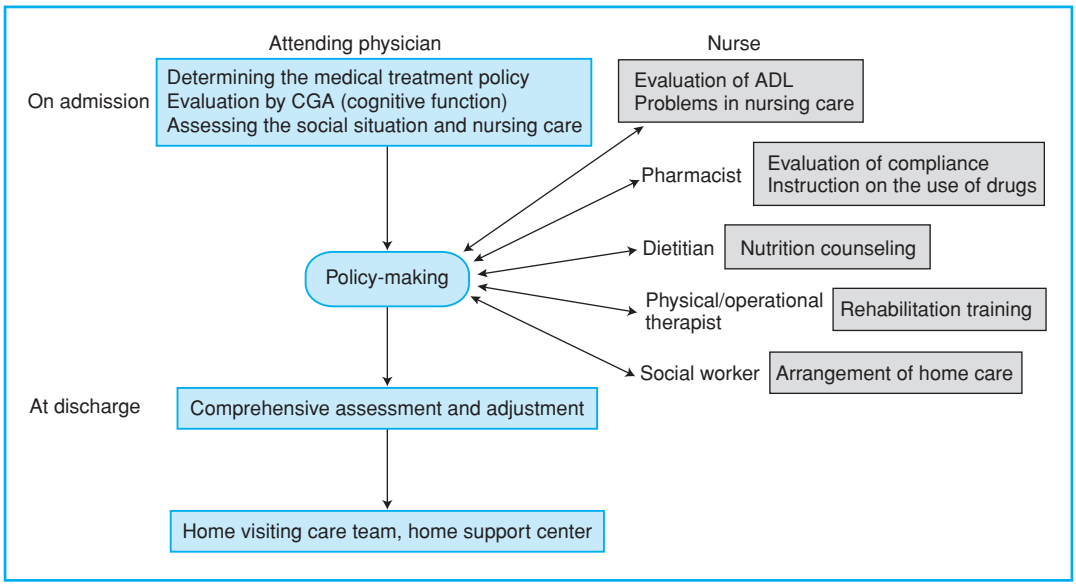
Forms of CGA and Their Usefulness

It has been reported that CGA is effectively associated with a decreased number of admissions, reduced length of hospital stay, decreased institutionalization, improved QOL, decreased medication, improvement of ADL, and decreased mortality.[4,5] CGA is divided into several forms

Table 2 Forms of comprehensive geriatric assessment (CGA)

(1) Geriatric evaluation and management unit (GEMU) (ward)
(2) Inpatient geriatric consultation service (IGCS)
(3) Outpatient assessment service (OAS)
(4) Hospital-home assessment services (HHAS)
(5) Home assessment service (HAS)

(Excerpted from Stuck AE, et al. Lancet. 1993;342:1032–1036)



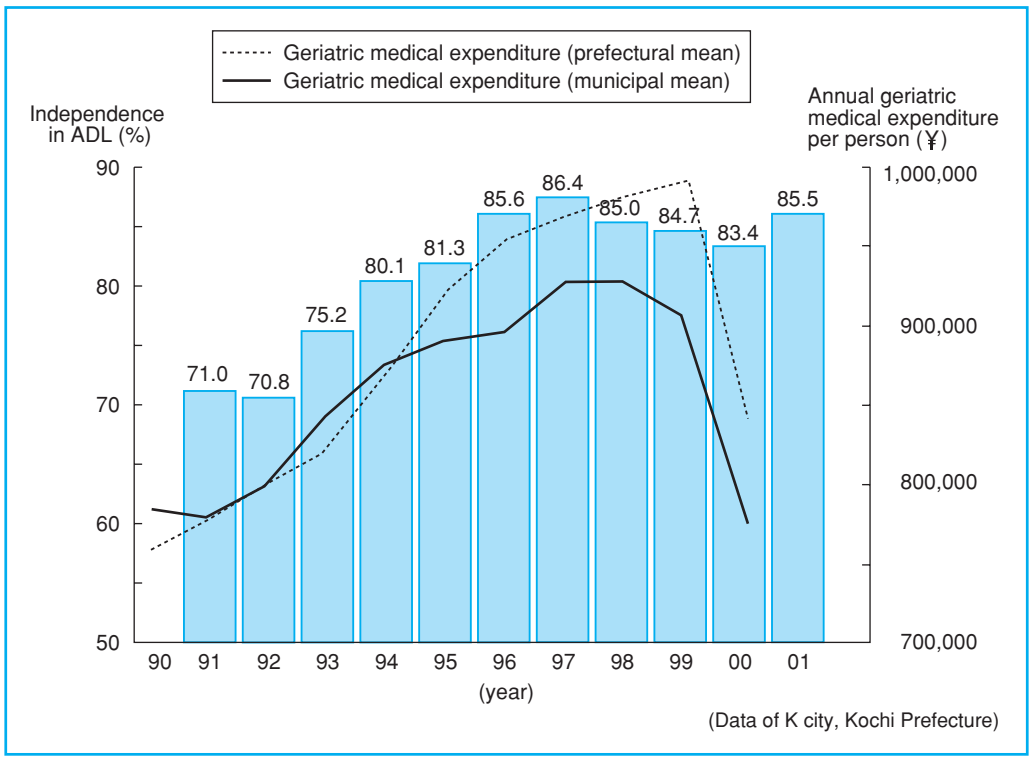
(Excerpted from Nishinaga M. Japanese Journal of Geriatrics. 2000;37:859–865)

Fig. 2 Flow chart of the multidisciplinary approach

according to its usage (Table 2).[5]

CGA employed for elderly patients with complex problems who were admitted to evaluation and management in special units designed for such patients have been reported to confer various benefits, such as improved functioning including ADL scores, decreased institutionalization, and decreased mortality.[1–5]

Repeated admissions represent a problem common to elderly patients with heart failure. Of 104 patients admitted to a hospital because of heart failure (mean age 79.2 years), 32% were admitted again within 6 months,[6] and 36% of the reasons for readmission were factors other than the disease itself, such as decreased compliance. In this connection, multidisciplinary intervention by a team consisting of the attending physician, physical/occupational therapist, medical social worker, nurse, dietitian, and pharmacist was carried out in a CGA and management unit, in order to allow elderly patients with heart failure to continue living at home after discharge (Fig. 2).[2] Among patients who experienced two or more admissions within 2 years, 66 patients (mean age 80 years) who were admitted to the CGA and management unit were compared with 112 patients (mean age 81 years) who were admitted to general wards. The percentage of patients who experienced another admission within 30 days after discharge was 17% for general ward patients, whereas it was 1.5% for CGA unit patients. The corresponding percentages for readmission within 100 days after discharge were 41% in general ward patients and 21% in CGA unit patients. Thus, both readmission rates were lower in CGA unit patients.[6] In addition, when NYHA functional classification, ADL score, number of admissions and hospital days with heart failure, and total medical cost before intervention were compared with those after intervention in 29 patients who were followed for more than a year after discharge from the CGA unit, all these parameters were found to have improved after intervention.[7]



(Excerpted from Department of Geriatrics, Kochi Medical School Hospital. 2002 Report of the Kohokucho Healthy Long Life Plan)

Fig. 3 Annual changes in degree of independence and geriatric medical expenditure over 10 years in elderly residents in a city in Kochi Prefecture

The use of CGA for inpatient consultation or outpatient assessment represents a low-cost strategy, but few reports have documented its usefulness, probably because of the lack of sufficient control over home care after discharge, resulting in inadequate implementation of the recommendation and interventions indicated by CGA, because of the failure to choose subjects who could benefit most, or because of the lack of long-term follow-up. Since most elderly patients require home care, it is considered that the usefulness of CGA depends on the coupling of assessment during hospital stay and care after discharge.[1]

CGA of local elderly residents has progressed in the UK, Denmark, and other countries, and is mainly aimed at preventing the frail elderly from falling into a state that would require nursing care. In recent years, the usefulness of this type of CGA has been reported from the USA, Italy, Germany, and other countries. In Japan, Matsubayashi et al. carried out CGA in local elderly residents of a city in Kochi Prefecture, and provided intervention based on the results of assessment. As a result, they obtained an increase in the percentage of elderly individuals independent in ADL and a lowering of the increase rate in mean annual medical care expenditure per elderly individual, despite the further aging of the population[8] (Fig. 3).

Stuck et al.,[5] who carried out a meta-analysis of 28 reports on CGA using controls, reported that improvement in physical function was obtained only when CGA was used in specialized CGA units, and the preventive effect on institutionalization was associated only with CGA used for local elderly residents. In addition, a significant prolongation of home care was achieved only by CGA in specialized CGA units and by CGA used for discharge from the hospital to home.

All healthcare professions dealing with the elderly are required to consider the treatment and care of these patients, based on a broad vision that includes not only the patients themselves but also their families. A uniform, rigid intervention that provides a patient with a predesignated form of care is not adequate for the complex situations of individual patients. Although it is apparent that CGA is a useful method of assessment, it is necessary in implementing the recommendations drawn from the results of assessment to be aware of the change in the system, giving close attention to the following: selecting appropriate subjects; coordinating assessment, care planning, and implementation; and conducting regular follow-up evaluations.

In many hospitals where CGA has been introduced, various healthcare professions including physicians, nurses, physiotherapists, pharmacists, caregivers, and medical social workers share information in a common language (i.e., via a standardized assessment tool), and participate as independent professionals in preparing the treatment or care plan and the individual medical or nursing care plan from hospital to home, thereby improving the quality of care plans. In addition, more than a few CGA instructors attach importance to the effect of this approach in leading to an increase in the motivation of each healthcare professional as an independent specialist.

Conclusion

Although the concept of CGA is spreading to local communities following the advent of government-sponsored long-term care insurance, when long-term care insurance is to be provided, continuity from medical care to nursing care is mainly based on the attending physician's statement. Therefore, support for such continuity can be somewhat precarious in the case of frail elderly patients who are repeatedly hospitalized. Although changes will be made to the medical care system and a rapid increase in the population of the frail elderly is likely in the future,[9] the spread of CGA as a powerful tool of medical institutions directed toward local residents is certainly desirable.

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Neurosurgical Practice in Japan

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Although neurosurgery may be a specialized field of medicine, it covers a broad spectrum of diseases, including cerebrovascular diseases, brain tumors, diseases of the spine and spinal cord, trauma, epilepsy, Parkinson's disease, and congenital abnormalities, among others. These diseases tend to have close relationship with almost all other fields of medicine, not only neurology but also of systemic disorders of metabolism, endocrinology, and circulation, as well as trauma, emergency, and others. To achieve good therapeutic results, neurosurgeons should be fully acquainted with the etiology, pathophysiology, clinical manifestations, and peri-operative management of the patient. Thus, neurosurgery is a very broad field of medicine. The number of patients is also large. The cerebrovascular diseases, one of the major targets of neurosurgery, for example, are the third largest cause of death and the most frequent cause of dependency in Japan. Neurosurgery is regarded as one of the basic fields of clinical medicine in Japan (Table 1). The practice of neurosurgery has developed rather recently in Japan, with its development particularly remarkable during the last 30 years. This paper provides a short overview of some of the features of neurosurgery in Japan.

Neurosurgical Hospitals in Japan

In total, 1,126 neurosurgical hospitals had been approved by the Japan Neurosurgical Society as of 2006.[1] These hospitals are classified into Categories A and C according to size and training capacity. Large- and medium-sized hospitals, including 80 university hospitals and 310 other hospitals, are classified as Category A. Category C includes 836 small-sized hospitals (Table 2). Over 170,000 operations of various types are performed every year in Japan (Table 3).

Category C hospitals are distributed throughout the country and play an important role in the local healthcare by providing easy access to neurosurgical treatment. Because these small hospitals are equipped with up-to-date diagnostic and surgical instruments, they are able to offer good quality of surgery. Many neurosurgeons rotate periodically among the hospitals categorized as A or C.

The large- and medium-sized hospitals are, of course, able to manage more difficult cases. The most advanced techniques are available in these hospitals, and they provide specialized teams for endovascular therapy, functional neurosurgery for epilepsy and Parkinson's disease, and pediatric neurosurgery for infants and children.

The "brain-dock" is a unique system developed through the strong support of neurosurgeons in Japan.[2] It is a formalized screening system to detect asymptomatic brain diseases, functioning rather like a "brain check-up." The underlying concept is "early diagnosis and early treatment." Currently, about 400 facilities are registered in the Japanese Society for Detection of Asymptomatic Brain Diseases. Asymptomatic cerebral infarction, cerebral aneurysms, brain tumors, and white-matter lesions are often detected.[3] When a disease is detected, it may be treated conservatively, receive periodic examinations, or be operated on if necessary. The implications of and rationale for this kind of preventive healthcare are being discussed in Japan and other countries.[4–6]

Neurosurgeons in Japan

To maintain a high level of neurosurgery, a certain number of experienced specialists are required.

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Table 1 Japanese academic societies in basic clinical specialties

Japanese Society of Internal Medicine
Japan Pediatric Society
Japanese Dermatological Association
Japanese Society of Psychiatry and Neurology
Japan Surgical Society
Japanese Orthopedic Association
Japan Society of Obstetrics and Gynecology
Japanese Ophthalmological Society
Oto-Rhino-Laryngological Society of Japan
Japanese Urological Association
Japan Neurosurgical Society
Japan Radiological Society
Japanese Society of Anesthesiologists
Japanese Society of Pathology
Japanese Society of Laboratory Medicine
Japanese Association for Acute Medicine
Japan Society of Plastic and Reconstructive Surgery
Japanese Association of Rehabilitation Medicine

(Japanese Board of Medical Specialties)

Table 2 Neurosurgical facilities in Japan

Category	Hospitals	Number
A	University hospitals	80
	Other large- and medium-sized hospitals	310
C	Small hospitals	836
	Total	1,226

(Japan Neurosurgical Society, 2006)

Table 3 Number of neurosurgical operations per year

Brain tumors	23,427
Cerebrovascular disorders (cerebral aneurysms, vascular occlusions, etc.)	44,490
Head and spinal trauma	40,136
Congenital anomalies	1,250
Hydrocephalus of various etiologies	15,912
Spine and spinal cord	11,751
Functional neurosurgery (epilepsy, Parkinson's diseases, etc.)	3,210
Endovascular treatment	15,381
Stereotactic radiotherapy and radiosurgery (Gamma Knife, CyberKnife)	15,836
Total	171,393

(Japan Neurosurgical Society, 2006)

Table 4 Subspecialties of neurosurgeons in Japan

Subspecialty	Multiple choices	Single choice
Brain tumor	37.2	18.1
Cerebrovascular diseases	70.9	31.9
Head trauma	35.1	3.8
Pediatric neurosurgery	7.4	3.5
Spine and spinal cord	16.0	10.7
Functional neurosurgery	11.3	8.5
Endovascular treatment	10.2	9.9
Stereotactic radiosurgery	4.4	2.6
Brain-dock (brain check-up)	16.4	2.4
Others	15.5	8.6
Total (%)	224.4	100.0

(Japan Neurosurgical Society: Survey of activities of neurosurgeons, 2005)

Japan is among the countries where a large number of neurosurgeons have been successfully trained. Japan has 3,887 neurosurgeons in a total population of 128,000,000. Some of these neurosurgeons are engaged in sub-specializations of neurosurgery, whereas a larger number of neurosurgeons cover broad areas of neurosurgery including vascular disorders, tumor, and trauma (Table 4).[1] These different types of neurosurgeons, as a whole, provide neurosurgical services to people throughout Japan, all of whose citizens are supported by the country's public medical insurance system.

Board Examination for Neurosurgeons

The Japan Neurosurgical Society introduced a board examination system in 1966 to certify the level of clinical practice of neurosurgeons. A resident can apply for the board examination when he or she has accomplished a designated training course in the training hospitals approved by the Neurosurgical Society. The examinee has to pass written and oral tests in three areas of neurosurgery, (a) brain tumor and infection, (b) vascular disease and trauma, and (c) functional neurosurgery, spine, and congenital malformations. The pass rate is approximately 65%. Board-certified neurosurgeons are obliged to update their knowledge by attending a designated number of academic seminars and conferences every year.

Future Prospects

The current system of neurosurgical training and practice in Japan has been established through the continuous effort and strong sense of mission of senior neurosurgeons. The system so far is working well. However, the medico-social environment is not reassuring. The economic fundamentals underlying the public medical insurance system are in crisis. Nevertheless, citizens expect more and more from medical practice. Doctors are becoming exhausted from the intensity of risk management and the heavy bureaucratic burden. Young neurosurgeons will have to work harder and learn more about the very advanced areas of medcine.[7] The Japan Neurosurgical Society hopes to find good solutions for the next generation of neurosurgery.

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Japan Pediatric Society

Achievement of Child Health and Welfare in Japan and Current Problems Faced

JMAJ 50(6): 471–473, 2007

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The Current Situation of Child Health in Japan

The infant mortality rate in Japan is very low. This has been achieved as a result of the extensive endeavors of people engaged in executing Japanese policies on maternal and child health since World War II. The infant mortality rate decreased from 60.1 per 1,000 live births in 1950 to only 2.8 in 2005.[1] The reasons for this splendid accomplishment are of course multi-factorial.

Small socio-economic difference among the people

Although Japan's Gross National Product was not so large during the early years after the War, socio-economic differences among the people were small, and have remained so until recently. Such low levels of socio-economic difference are important in driving people to improve their situation on a common basis. The maintenance and promotion of health and welfare are no exception.

Easy access to medical care

Financial accessibility: A well-organized national health insurance

Coverage of the entire nation with national health insurance was attained in 1961 and now almost all Japanese are covered by national health insurance with a coverage rate of 97.8% in 2001. Moreover, although certain portion of medical fees are paid by patients or the patients' parents, even this portion of medical fees is paid by the government for children suffering from certain diseases, in the case of about 10 disease categories such as obstinate hematological diseases, life threatening endocrine diseases, almost all kinds of child cancer, etc. Recently, many local governments offer free medical care for children below a certain age—3 years old in most cases, but even 12 years old in some areas. These medical policies have made medical access very easy for parents, who are usually still young and whose incomes are relatively low.

Financial accessibility: Inexpensive medical fees

The average expenditure of Japanese people on medical fees is smallest among OECD countries.[2] This is less than the average national expenditure on gambling. In particular, expenditure on medical care and welfare for children is very small and only about 1/10 of the expenditure on "Pachinko," the most popular gambling game in Japan.[3]

Spatial accessibility: Characteristics of spatial distribution and the scale of hospitals

The most noticeable characteristic of the distribution of hospitals is that many small-scale hospitals are located to adjacent to dwellings. About half of hospitals have only 1 or 2 pediatricians in their pediatric department and only 16% of hospitals have more than 7 pediatricians.[4]

Easy consultation with pediatricians: Japanese pediatricians as generalists

Japanese pediatricians are principally generalists. Children with any disease can visit a nearby hospital from the beginning and have the necessary medical care immediately.

Widely-distributed Maternal and Child Health (MCH) Handbook

MCH Handbook was first launched in 1948, to publicize the ideas behind the "Child Welfare Law" enacted in 1947, and has been revised every 10 years. Each revision has incorporated new results in medical and child health achievement.

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Table 1 Laws contributing to promote child health and welfare

1. Enactment of the Child Welfare Law in 1947.
2. Establishment of Child Charter in 1951.
3. Enactment of Maternal and Child Health Law in 1965.
4. Establishment of National Health Insurance Law in 1958.

This handbook includes various records of mother's health status during pregnancy, perinatal events, periodical health and development assessment, immunization and other events concerning child health, and also includes various helpful suggestions for parents to nurse their children. This handbook is very useful to focus people's attention on child health and even helpful for pediatricians to know their patients' conditions before children appear in their offices. This usefulness has been noticed in many foreign countries and several countries have employed similar system and other countries are planning to introduce a pilot trial in conjunction with Japan International Cooperation Agency (JICA) or others.[5]

Population-based disease screening and health check system

Neonatal screening program for inherited metabolic diseases, that is, phenylketonuria, maple syrup urine disease, homocystinuria and galactosemia, was started in 1977 and, thereafter, screening for cretinism in 1979 and for congenital adrenocortical hyperplasia in 1988 was added to this screening program. At present, almost all neonates are screened. The screening rate for 2005 was 105.5% (low birth weight neonates weighing 2,000 g or less were screened twice or more).[1]

Devoted behavior of medical workers, especially pediatricians

Under unlimited insurance coverage, people do not hesitate to visit hospital for trivial reasons. This behavior makes early detection of possible fatal disorders easier. Actually, the frequency of outpatient visits by Japanese people is very high, the highest among developed countries.[6] However, because hospital visits are not limited to weekday daytimes, but people visit hospitals 24 hours a day, 365 days a year, the working day of pediatricians is very long and 36 hours continuous work is not rare. More than 18 % of pediatricians have no days off in a month. According to our own experience, about 1/4 (7,500/year) of children who visit our outpatient clinic come out of office-hours (emergency visit). These children do not need to pay an additional charge for an emergency visit.

The factors which are thought to have contributed to the low infant mortality rate in Japan are the results of several epoch making events which occurred after the World War II (Table 1).

Current Problems in Child Health and Welfare in Japan

Some of the above-mentioned factors, which have contributed to the low infant mortality rate and long life expectancy in Japan, have also turned into factors that could lead to the collapse of the Japanese medical care provision system for children.

Easy accessibility to medical care

Inexpensive medical expenses

Too many Japanese people visit hospitals too often regardless of the nature of their illness. They seem to have abandoned the custom of giving some thought to their own, or their child's, health status. Medical staff, especially pediatricians working in hospitals, are exhausted due to extreme hard work. Such pediatricians and medical staff tend to leave hospitals and many of them open private practices, which is much easier because they can adjust their working load by themselves.

Characteristics of spatial distribution and the scale of hospitals

Hospitals which are small-scale but very close to the dwellings of patients are very convenient to patients but worrisome to the pediatricians who work there, because patients visit the hospi-

tals around the clock, but there is often only one pediatrician to see them.

Devoted behavior of medical workers, especially pediatricians

Japanese are hardworking people. Medical workers are not an exception and, in particular, Japanese pediatricians are very conscientious and feel that taking care of sick children with any kind of illness is their obligatory duty. This kind of devoted behavior inevitably brings about burn-out when a certain threshold is exceeded.

Shortage of pediatricians in hospitals

As the consequence of above-mentioned and other factors, many pediatricians have left hospitals. There are many hospitals that have no pediatricians or can maintain only outpatient care by part-time pediatricians. Moreover, it is difficult to recruit pediatricians from newly-graduated medical students because young people want to avoid such hard work at hospital. The present situation of child health and welfare is facing vicious circle, in that fewer newcomers in pediatrics is resulting in even harder working conditions.

Future Prospects

In order to shake off this vicious circle and keep children's health and welfare in good shape, we need radical and urgent innovation in the present structure of the health care system.

The Japan Pediatric Society has proposed the following innovative model as a new structure for the health care system.[2]

Centralization of hospitals

Central hospitals should employ adequate pediatricians to provide good quality medical care 24 hours a day, 365 days a year without the overworking of pediatricians.

Appropriate division of roles to maintain community health care

Smaller-scale hospitals which are usually unable to employ adequate numbers of pediatricians should not conduct inpatient care, but instead provide close medical care and health support to the community on an outpatient basis.

Incorporation of pediatricians in private practices into community health care organized at large

Pediatricians in private practices do not usually work during nighttime or at weekends, but they should participate in the care of children on emergency visits during nighttime and at weekends. They should also participate in health education for the community to avoid the waste of medical resources and to help people maintain their own health.

Conclusion

We need prompt action to stop the impending collapse in the medical care system for children and restore the excellent levels of medical care for children achieved in the past.

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Recent Topics in Ophthalmological Practice in Japan

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According to the Tajimi Study, an epidemiologic study carried out in Tajimi, Gifu Prefecture in Japan, from 2000 to 2001, the prevalence rates of blindness and low vision as determined by WHO criteria were 0.14% and 0.39%, respectively, among people aged 40 years or older.[1] These figures were lower than the corresponding rates obtained by epidemiologic studies in Los Angeles (0.2% and 0.7%) and Tanjang Pagar, Singapore (0.5% and 1.1%). Reports from various parts of the world also indicate that the prevalence of visual disturbances in Japan remains among the lowest. The following factors may contribute to the low prevalence in Japan: increased national attention to the treatment of ophthalmologic diseases in concert with the rapidly growing economy following World War II, and the spread of medical services under the universal health insurance coverage available in this country. The causes of blindness include optic nerve atrophy, myopic macular degeneration, pigmentary degeneration of the retina, and uveitis, while cataract and glaucoma are major causes of low vision.[1] According to the 2006 report by the Research Group of the Ministry of Health, Labor and Welfare, visually impaired people, as determined by applications for a physical disability certificate, totaled about 390,000 individuals, with the most frequent cause being glaucoma (20.7%), followed by diabetic retinopathy (19%), pigmentary degeneration of the retina (13.7%), age-related macular degeneration (9.1%), and high myopia (7.8%).

Epidemiologic data on glaucoma from the Tajimi Study showed that the prevalence of glaucoma in Japan was higher than in previous reports, with the figures being 5.0% for established glaucoma and 7.5% for established or suspected glaucoma among those in their 40s or older.[2] In terms of the type of glaucoma, primary open-angle glaucoma (POAG) accounted for almost 80% of all glaucoma cases (3.9% as a whole); other cases were primary angle-closure glaucoma (0.6%) and secondary glaucoma (0.5%). A comparison with reported rates of prevalence in various countries showed that these rates were higher than those in Caucasians but slightly lower than those in blacks. It is noteworthy that about 92% of POAG patients had normal-tension glaucoma (NTG) with an intraocular pressure (IOP) of 21 mmHg or lower. The mean IOP (right eye) in POAG was 15.4 mmHg. Although this was significantly higher than the mean IOP (right eye) of 14.5 mmHg in non-glaucoma eyes, the distribution of IOP was similar in POAG eyes and non-glaucoma eyes. A peculiar feature of glaucoma in Japan was that the proportion of NTG in POAG cases in this study was higher than in any previous study. However, the proportion of NTG tends to be increasing throughout the world as a result of changes in the definition of glaucoma and advances in diagnostic techniques. Newly diagnosed glaucoma accounted for about 90% in this study, which limited the significance of IOP in the detection of glaucoma and indicated the importance of funduscopic examination. A multivariate logistic analysis showed that IOP, age, and myopic degree were risk factors for POAG. The odds ratio was 1.12 for a 1-mmHg increase in IOP, 1.06 for a 1-year increase in age, 1.85 for low myopia, and 2.60 for moderate or higher myopia.[3]

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Optical fundus image analysis by optical coherence tomography or confocal laser scanning is used widely for the diagnosis of glaucoma and macular diseases. In recent years, Fourier-domain optical coherence tomography (FD-OCT), which has higher resolution than conventional time-domain optical coherence tomography (TD-OCT), has come into practical use. FD-OCT requires no mechanical scanning in the depth direction, but can compose two-dimensional tomographic images by transverse scanning alone, allowing rapid scans. This has reduced motion artifacts and helped provide precise three-dimensional morphologic information about the optic disk and macular area. FD-OCT allows us to distinguish the external limiting membrane in the macular area, which could not be visualized by the conventional procedure. Observation of the macular hole by FD-OCT has demonstrated round disruption of the external limiting membrane in Stage 1, adding a new finding to the mechanisms of macular hole formation.[4] It is expected that visualization of the ganglion cell layer surrounding the macula and observation of the spatial morphology of the lamina cribrosa would result in new progress in glaucoma research.

Exudative age-related macular degeneration (AMD) is the most frequent cause of blindness in the elderly in the United States. Photodynamic therapy (PDT) with verteporfin has been the main treatment for this condition. However, recently, intra-vitreal anti-vascular endothelial growth factor antibody (anti-VEGF antibody) has become common as a result of its high therapeutic efficacy. In recent years, AMD also has become more frequent in Japan. An epidemiologic study in Hisayama revealed that the prevalence was 0.87% among those aged 50 years or older, the incidence rate was 0.8% over a period of 5 years, and the main contributory risk factor was smoking.[5] When AMD cases in Japan were analyzed in detail by indocyanine green angiography, pathologic features different from those found in European and North American cases were found. A study of 289 cases included 35.3% typical AMD, which accounts for the vast majority of cases in Europe and North America, whereas polypoidal choroidal vasculopathy (PCV) was most common (found in 54.7%), and retinal angiomatous proliferation (RAP) was noted in 4.5%.[6] In treating PCV, PDT was found to be more effective than in typical AMD.[7]

Cultured epithelial sheet grafting using corneal epithelial stem cells or oral mucosal epithelial cells was developed as a technique for regenerating the corneal epithelium in corneal stem cell deficiency caused by heat or chemical corrosion, or in cases of Stevens-Johnson syndrome. Formerly, conjunctival transplantation or keratoepithelioplasty was employed to restore the corneal epithelium, but it was difficult to achieve permanent reconstruction of the corneal epithelium because of the short turnover time. Later, it was found that corneal epithelial stem cells are located in the limbal epithelium, and production and transplantation of an epithelial sheet obtained from cultured autologous corneal epithelial stem cells solved the existing immunological problems, thus enabling reconstruction of clear epithelium from intractable cicatricial corneal epithelium. The epithelial sheet can be produced by a method using the amniotic membrane as a substrate or a method using a temperature-responsive culture plate. The latter method is advantageous in that a strong cell-adhesion apparatus is maintained because an epithelial sheet can be detached from the culture plate, which has been treated with a temperature-responsive intelligent polymer, without using proteolytic enzymes.[8] In patients with bilateral disease in whom no autologous corneal epithelial stem cells are available, cultures of autologous oral mucosal epithelium have provided favorable results.[8,9]

Since retinal ganglion cells have no regenerative function, there has been no established treatment for ischemic, compressive, or traumatic optic neuropathy. However, direct electrical stimuli to the rat optic nerve have been found to exert a neuroprotective effect on retinal ganglion cells with broken axons, and it has been demonstrated that trans-corneal electrical stimulation (TES) using a contact electrode also has a neuroprotective effect on retinal ganglion cells. This neuroprotective effect has been thought to be based on the synthesis and secretion of IGF-1 from Muller cells.[10] A tendency to improved visual acuity and field of vision has been noted in patients with nonarteritic ischemic or traumatic optic neuropathy who underwent TES with a 600–800 μA of electrical current at 10 ms/phase, 20 Hz, over 30 min. This finding suggests the possibility of the clinical application of this technique to cases of optic neuropathy, for which there has been no established treatment.[11]

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Study Group Activities for Medical Care for Children in Miyagi Prefecture

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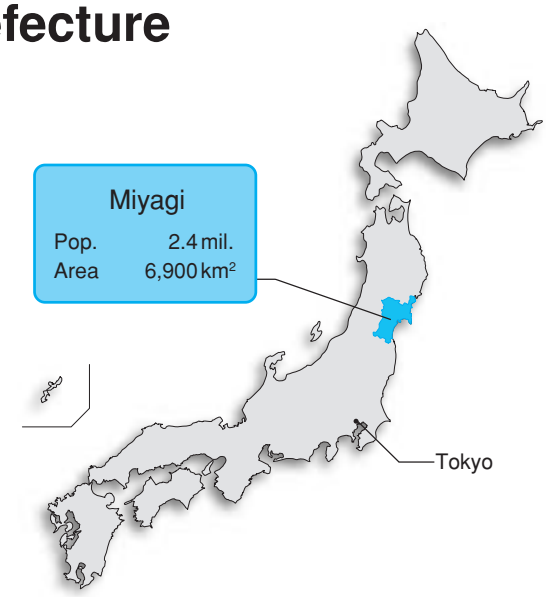

As part of the CME activities of JMA, the Miyagi Medical Association has annually held meetings of the emergency medical care study groups in five districts of the prefecture.

Prefecture residents have recently expressed a strong desire for beefed-up emergency medical care for children, and in 2004 the prefecture prepared budget for an emergency pediatric physician training program and commissioned the Miyagi Medical Association to operate it.

The prefecture is divided into 10 secondary medical care regions. (Fig. 1)

The figure shows the distribution of pediatricians in these regions. (Table 1) As the data in Table 1 show, there is a great variation among the regions in the population of children per pediatrician. The number ranges from 2,009 to 6,254.

Whereas the Sendai and Shiogama medical regions in the center of the prefecture enjoy a sufficient number of pediatricians, the number of pediatricians in the surrounding medical regions is extremely low.

A many causes may lie behind this variation. In Miyagi prefecture, the Pediatric Department at the Tohoku University Medical Faculty cannot spare the pediatric staff to assign full-time pediatricians to hospitals in medical regions distant from the prefectural government of Sendai.

Conventionally, full-time hospital pediatric staff have won the trust of patients from the healthcare they provide over many years and have opened their own offices on the basis of the reputations thus built. However, part-time pediatricians find it difficult to open their own clinics in such areas. Even if they were to do so, they would find little time to participate in study group meetings or attend lectures in central areas such as Sendai. Or they may find that a busy practice leaves little time for further study on their own. The educational opportunities for their own children and for access to their own cultural and other personal interests may be among other factors that tend to discourage pediatricians from standing practices in such medical regions.

It will be extremely difficult to fundamentally eliminate this problem because of too many factors involved.

For these reasons, pediatric practices in regions lacking sufficient pediatricians also lack the workforce required to cope adequately with emergency medical care outside office hours on top of the primary care they provide during regular hours.

Guardians with child patients have now come to expect advice and treatment from pediatric specialists at all times. In the medical regions with insufficient numbers of pediatricians, however, there is no way to maintain health service in primary pediatric care without the cooperation of pediatric advocates in other specializations. In order to maintain the quality of pediatric care in these medical regions, it will be important for

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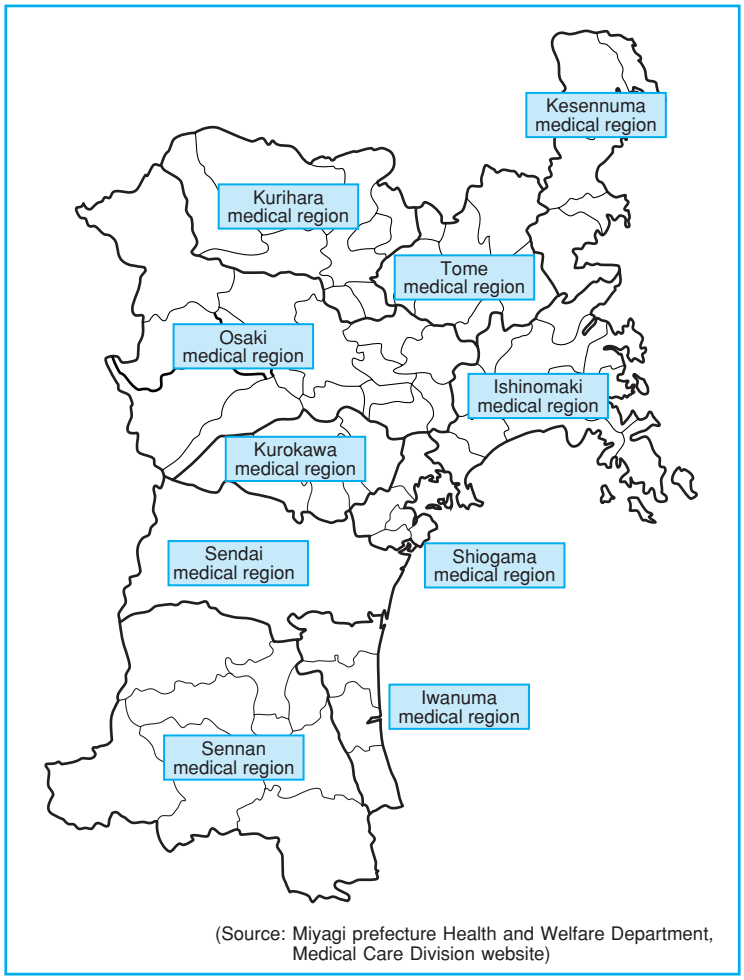

(Source: Miyagi prefecture Health and Welfare Department, Medical Care Division website)

Fig. 1 Secondary medical care regions (as of 20 Feb 2004)

Table 1 Pediatrician distribution (2004 survey)

Medical region	Pop. aged 15 or less	Pediatricians	Pro-pediatric institutions (excl. pediatric practices)
Sendai	142,669	71	114
Sennan	25,669	8	25
Shiogama	28,701	14	18
Iwanuma	25,015	4	13
Kurokawa	13,402	4	8
Osaki	30,005	5	31
Ishinomaki	31,589	7	21
Kurihara	9,903	2	11
Tome	11,775	4	7
Kesennuma	14,047	5	11

physicians with other specializations who advocate pediatrics also to pursue studies in primary pediatric care.

Focusing therefore on the absolute essentials of emergency medical care for children, we enlisted Dr. Mitsuya Kudo, head of the pediatrics department at Furukawa City Hospital to organize studies in the Kesennuma, Ishinomaki, Osaki and Kurihara medical regions on the theme of "Pitfalls in Emergency Medical Care for Children."

We also called on Dr. Daiki Abukawa, head of the general clinical department at the Miyagi Children's Hospital, to lecture for specialists in pediatrics in the Shiogama medical region which is relatively well-endowed with pediatric specialists.

One-off studies in emergency medical care for children produce only little outcome, continued and repeated training is absolutely necessary in this field.

The future plan will be use "the Training Program for Emergency Pediatrics" budgeted by the Ministry of Health, Labor and Welfare in 2004.

Introduction of a Direct Presidential Election System of the Akita Medical Association

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The current board of the Akita Medical Association began its 5th term this year (as of 2005). With strong leadership from President Toshio Terada, the association has determined that some change is required and should be implemented for the feature of our medical association.

The Akita Medical Association decided to introduce a direct presidential election system at the 128th meeting of delegates in June 2005, making it the third prefectural medical association to introduce such a type of an election system, following the Kyoto Medical Association (1953) and the Kagoshima Medical Association (2000). We believe that this system will have great significance for the future of our medical association. However, the process of introducing this new system was far from easy, requiring approximately 8 years between the proposal and its adoption. The story of this process in our association's electoral procedure will be described below, to provide an informative example for other medical associations that are considering the introduction of a direct presidential election.

Composition of the Akita Medical Association's Board

In the initial term of the current board of Akita Medical Association, executive members were selected with top priority given to functionality, reflecting the policy of the president. At that time, candidates were sought from throughout the prefecture, taking into account age, sex, and type of medical practice. Although two senior association members held positions as vice presidents, executive board members, as the actual governing body, were predominantly younger individuals. When the board was set up, the president was the youngest of any of the presidents of prefectural medical associations in Japan, as was the mean age of the board members. This young board has been efficient in carrying out its duties on behalf of the association and has received high praise from members of the association.

At least one female association member has been recruited as a board member, and the executive board members have always included some hospital doctors (at least 3 individuals).

Composition of Delegates to the Japan Medical Association

There are 342 delegates to the Japan Medical Association, of whom two are women and less than 30 are hospital doctors. This composition is markedly disproportionate to the overall membership of the Japan Medical Association. Four delegates from Akita Prefecture are included one female doctor and three hospital doctors. These four have played an active part in discussion from the standpoint of participation. The

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youngest delegate is also from Akita Medical Association.

Background of the Introduction of the Direct Presidential Election System

From its beginning, the current board of the Akita Medical Association thought it would be desirable to introduce a direct system of election for choosing the president as a means of allowing the general membership to exercise its basic rights. In 1997, an exploratory committee was set up in the association to oversee amendment of the articles of incorporation and development of a direct presidential election system. However, no consensus was reached within the exploratory committee, and the committee provided a report presenting both options, thereby leaving the issue open for continued discussion.

At that time, the following opinions were presented during the discussion.

Opinions in favor of direct election by the entire general membership

1) Direct election would draw the attention of the general membership to the medical association and enhance their participation in it.
2) Direct election would allow the general membership to directly choose the top representative.
3) Delegates would vote their own choice of candidate rather than being influenced by the opinions of the general members that serve as their representatives.
4) "Guidelines for permission of the establishment and supervision of public-interest corporations" prescribe that board members be elected in a general assembly. Direct election, although somewhat limited, would be closer to the parameters given by the guidelines than indirect election by delegates.
5) Prefectural governors and mayors are elected by direct election even though they have assemblies. Likewise, direct election, if it were technically feasible, would be desirable.

Opinions in favor of indirect election by delegates

1) Direct election by the entire general membership would not necessarily produce a fair election because some could be influenced by the tide of opinion, without adequate knowledge of the personality or position of the candidate. It would seem fairer for the president to be elected by delegates who have been chosen in proportion to the number of members.
2) Delegates are elected as representatives of regional medical associations. Candidates for the position of delegate to the prefectural medical association are determined by discussion within each region. Namely, delegates should represent the general membership or reflect the intention of the general membership.
3) It is more important to promote the active participation of younger members and hospital doctors in the activities of regional medical associations than to consider the possibility of direct election.

At the beginning of the 5th term of the board in April 2004, the president of the Akita Medical Association announced that the introduction of the direct presidential election system would be reviewed. In June of the same year, this issue was discussed at the meeting of executive board members and board members, and the establishment of an exploratory committee to amend the articles of incorporation was approved at the 126th meeting of delegates. The committee members consisted of 10 individuals including 7 presidents of municipal medical associations and 3 executive members of the Akita Medical Association. The first meeting of the Exploratory Committee was held in September. Since this meeting also failed to reach any consensus as to the introduction of the direct presidential election system, a questionnaire survey of general members was carried out to obtain more information. The response rate was 40.3% of members. Of the respondents, 62.8% expressed either "strong" or "weak" approval for direct presidential election, and 35.8% gave either "strong" or "weak" approval for presidential election by delegates.

The second meeting of the Exploratory Committee was held in January 2005. Through discussion based on the results of the questionnaire survey, the Committee concluded unanimously that the introduction of direct presidential election would be desirable. A report detailing this conclusion was prepared by the Exploratory Committee and submitted by the Chair of the Exploratory Committee to the 127th meeting of delegates in March. It was decided that the Exploratory Committee was to be in charge of draft revisions of the articles of incorporation,

details of enforcement of regulations, and rules of the election. The meetings of the Exploratory Committee were held in April and May to prepare the rules for the presidential election, based on examples from the Rules of Election of the Kagoshima Medical Association. The final draft amendment of the articles of incorporation, its detailed enforcement regulations, and draft rules of election were prepared at the 3rd meeting of the Board of Trustees held in June, and all were approved in the 128th meeting of delegates held during the same month. The rules were to be applied to the presidential election in January 2006 and thereafter, prescribing that direct election by mail be carried out when there are two or more candidates for the presidency.

Significance and Future Prospects of the Introduction of the Direct Election System

It was not because of any problem with the conventional system of indirect presidential election by participating delegates that the direct presidential election system was introduced in the Akita Medical Association. The conventional system was operating smoothly, without any problems. The Akita Medical Association decided to adopt the direct presidential election system because we attached importance to the view that direct participation by the general membership in the process of decision-making is a fundamental part of the rights of membership. Although it is not possible for members to participate in all the affairs of the association, it is possible to participate in a presidential election, the most important event, one in which member participation is of great significance.

Medical associations in Japan are at a crossroads in terms of their activities and have various issues that need to be solved both within and outside their organizations. As a method of solving some of the problems within the organization, the use of direct presidential election or alteration of the composition of board members or delegates is important. We believe that our new approaches to improved participatory activities will spread to other medical associations throughout the country.

Challenges of the Nagano Medical Association

—Efforts by the committee on hospital doctors to address current problems—

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Masahiko HIDAI*1

Current Situation in Nagano Prefecture

Nagano is the fourth largest prefecture in Japan and much of its area is mountainous; consequently there are disparities in the medical services available among Nagano Prefecture's various regions. Some 19 areas within Nagano Prefecture are without doctors, and the number of doctors per person is 181.8 per 100,000 — below the national average and ranked 35th (out of 47 prefectures nationwide). Of the 2,625 members of the Nagano Medical Association, 1,228 are hospital doctors and 262 are female.

Patients are increasingly preferring hospital and specialist care, and hospital doctors are becoming exhausted as a result of overwork and unrelenting duties. The uneven distribution of obstetricians and pediatricians in particular continues to worsen and for this reason some hospitals and clinics have been forced to close. Such concentration of medical care facilities in the prefecture's 10 medical districts is causing local residents confusion and affecting hospitals as well.

The number of obstetricians in Nagano Prefecture per person is 8.0 per 100,000, which is the national average. However, there is a marked disparity between regions, ranging from 12.8 obstetricians per 100,000 people in Matsumoto City (where Shinshu University School of Medicine is located) to a low 5.0 in Kiso County and 4.8 in the Ueda and Chisagata district. There is also disparity among regions in Nagano Prefecture in the number of pediatricians, with 19.1 pediatricians per 100,000 people in Matsumoto City to 5.7 in Kamiina County and 4.8 in Kiso County.

In Iida City, between the summer of 2005 and spring of 2006, the number of medical institutions providing birthing facilities halved, falling from 6 to 3. For this reason, the Iida Medical Association set up an advisory council in cooperation with local administrative agencies, which created the "Common Obstetrics Medical Records." Furthermore, a "Hospital-Clinic Coordination System" was introduced in spring 2006. Under this system, the relevant medical facilities cooperate and coordinate their services, dividing roles so that, for example, examinations are conducted at local clinics but births take place in city hospitals.

Measures to Support Female Doctors

As part of measures to relieve the shortage of doctors, a survey of 266 female doctors in Nagano Prefecture (response rate: 50.4%) was conducted in September 2005 to ascertain the current situation for female doctors with a view towards improving the work environment to make it

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easier for them to continue working.

The age distribution of respondents peaked twice, at 25–30 years and 40 years and above, reflecting the reality of a high employment rate in the women's 20's followed by a dropping off of employment as the women married, had children, and took on child rearing in their 30s. This characteristic M-wave, rise and fall in female doctor numbers needs to be addressed. Regarding working style, 139 respondents (52.3%) were full-time hospital doctors, 23 (8.6%) were part-time hospital doctors, 27 (10.2%) were interns, 71 (26.7%) were in private practice, and 6 (2.3%) were on leave. Regarding fields of specialization, 91 respondents (34.2%) were internists, 25 (9.4%) were pediatricians, 25 (9.4%) were ophthalmologists, 21 (7.9%) were obstetricians, and 21 (7.9%) were dermatologists; there were few surgeons.

The greatest concern for female doctors was lack of time, but other factors that impeded their practice of medicine included a male-dominated society, lack of spousal understanding (76% of respondents were married to doctors), sexual harassment, and the burden of household and child-rearing duties. Moreover, the lack of child-care centers within hospitals made it difficult for respondents to respond to emergency calls. The survey results highlighted the poor conditions under which these female doctors must work, such as no substitute doctor system, inability to take maternity leave even when it is available, and difficulty in taking child-care leave. Female doctors in the midst of child-rearing relied most heavily for help on their parents, spouses, and babysitters.

Regarding medical association activities, 164 respondents (62%) were members of county and city medical associations and participated in administration of health check-ups, continuing medical education, and lectures. Reasons given for non-participation in medical association activities included lack of time or interest, or leaving participation to their association-member spouse. Two medical facilities in Nagano Prefecture have established work-sharing in pediatrics.

These work-sharing programs include supportive measures to better enable female doctors to balance the demands of work and family, such as (1) improvement and expansion of childcare facilities; (2) greater participation in housework and childrearing by men; (3) support for doctors returning to the workplace after maternity or childcare leave; (4) work-sharing; (5) improvement of after-school childcare facilities. However, other measures, including reduction of working hours during the child-rearing years, establishment of a system for reeducation after long leaves of absence, and doctor pooling banks, also need to be established.

Despite their difficult working conditions, most respondents thankfully said that they were "glad they had become a doctor."

Promotion of Hospital Doctor Participation in Medical Associations

Hospital doctors committees in the past have debated the merits and demerits of medical association membership, and in recent years the following positions have been made clear:

1. Medical associations should take the position of addressing the various problems encountered by hospital doctors (doctor shortage, uneven distribution of specialist fields, overwork, etc.) and work to resolve these problems.
2. Prefectural medical associations should hold various training workshops to better enable hospital doctors to obtain conveniently the qualifications they require (Japan Medical Association Program to Certify Industrial Health Physicians; Program to Leaders and Instructors for Clinical Doctors, etc.).
3. Medical associations should provide information about the merits of the Professional Medical Liability Insurance Program of the JMA and encourage interns to take out insurance.
4. Medical associations should significantly increase the percentage of hospital doctors on their boards to better reflect the opinions of hospital doctors.
5. Medical associations should reduce association membership fees for hospital doctors (i.e. reducing individual membership fees and increasing institutional membership fees).
6. Medical associations should provide guidance and support for doctors seeking employment or to set up private practices.

As reported in the JMA Newsletter, the Nagano Medical Association Newsletter has been publishing a "Hospital Doctors' Page" since its August 2001 issue. Choice of themes for page contributions is unrestricted to enable hospital doctors to write candidly about the problems that they face.

Of the 60 or so delegates of Nagano Medical Association, only two are female doctors. The time is now ripe for the establishment of a Female Doctor Committee (provisional name) to promote participation in association committees by female doctors in the future. A forum is needed for female doctors to discuss problems they face, such as the doctor pooling bank and other issues.

As a measure to alleviate the doctor shortage, the Shinshu University School of Medicine has increased its regional doctor quota by 10. Like Jichi Medical University, Shinshu University hopes to raise the number of doctors burning with a mission to contribute to regional medical services.

The doctor shortage resulting from uneven distribution of obstetricians and pediatricians poses a potential future crisis for regional medical services in Nagano Prefecture. Expectations are held for collection the wisdom of the Hospital Doctors Committee and the Regional Medical Services Action Council and also for the "zeal" of "enthusiastic young doctors" in their later clinical training (third year onward) under the newly implemented Postgraduate Clinical Training System.

The Centralized Health Database in Iceland

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Jon SNAEDAL*1

Iceland, which is situated between Europe and North America, has a population of only 0.3 million. The island was first populated in the 9th Century and most of the immigrants came from the other Nordic Countries, primarily from Norway. In the 11th Century written language was installed, which at that time was mostly the same as the Nordic countries and during the next 200 years literature boomed, leading to the production of the Icelandic Sagas. Part of this literature contains fairly extensive information on individuals living in Iceland at that time. The first population-based census was made in the year 1703 and there is a fairly extensive knowledge of the population since then. Personal information from these sources and church registers has now been put into a genealogical database, which contains over 700 thousand names of people who have lived in the country over the past 1,100 years, and how they are related to each other. This database is open to the public and every citizen can apply for a code and see how he/she is related to any other Icelander, living or dead. The author of this article did so and found out that he and his wife had a common ancestor seven generations back! The existence of this database spurred the idea for a more extensive database of health information, an idea that has caused an inflamed debate in the country.

It all started in 1998 when a bill was presented to parliament on the collection and use of all available health data on every individual in the country. The idea was to link this database to the existing genealogical database. It would also be technically possible to link all the information to a third database containing information on genetic material, i.e. blood samples which had been collected for use in genetic research on several conditions. This material had been collected by a genetic research company, the same company that put forward the idea of the health database, deCode Genetics. The centralized health database was supposed to contain data from all hospitals and primary care clinics, as well as from other sources such as pharmacies. By connecting these three databases it would be possible to create a great deal of new information, which could be used for health planners and companies in health care alike. The idea was to grant a private company, deCode, the sole ownership of this information, by contract with the health authorities. Furthermore it was implicit in the proposal that a specific ethical board would have to accept all use of data for research and that the Data Commission of the State would control the security of the database. This idea, originating in the company, received political backing and was therefore presented as a bill to be accepted by the parliament.

The research community as well as the Icelandic Medical Association reacted promptly to this idea. It was clear that the collectors of the health information would primarily be the doctors treating the patients, as most of the information would stem from the medical records. This represented a substantial change in purpose from former conduct of health data collection, which had been for use in diagnosis and treatment of individual patients; now, this would also be used by a third party, and for sale! After months of discussion and some changes to the bill, it was accepted by the parliament as a law, a regulation based on the law was published and a contract was made with deCode, despite protests from doctors and researchers. Among the most important changes made to the bill was the introduction of alleged

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consent; which implied that individuals could opt out of the database by signing at the office of the Surgeon General. Information about all other individuals would be transported to the database. If informed consent had been introduced, the Icelandic Medical Association would have stopped its resistance.

In the aftermath of the acceptance of the law, talks were started between the Icelandic Medical Association and deCode in order to come to some mutual understanding of the ethical issues. The negotiations were not fruitful but nevertheless a mutual understanding was reached that both parties should accept the Declaration of the WMA on Ethical Considerations Regarding Health Databases,[1] which was then in preparation. It is another story that when WMA had accepted the declaration on health databases both parties had different interpretations of the content.

Parallel to this, the work of establishing the centralized health database was conducted. The whole enterprise turned out to be very complicated; the security issues concerning the data were severe and finally, after more than a year of preparations, the company set aside the idea. It was then obvious that the company's financial capacity to establish and run the database was not sufficient, not least as the income to be gained from selling the data was both uncertain and far ahead into the future. The centralized health database was therefore never realized but the other two databases are in use in compliance with ethical guidelines.

What can be learned from this experience? When this idea, which contained a fundamental ethical change, was put forward, the time limit for a decision to be made was very short. The reaction had to be fierce to be successful and this meant that the discussion was far from balanced. When participating in a non-balanced dialog in public, it is very difficult to move from that track without seeming to be in conflict with your previous views. The result was therefore not achieved by the consensus of society, but by political force. Many doctors claimed that they would resign if the information they collected for the benefit of their patients were to be moved to a database for other purposes, but we will never know what would have happened.

It is therefore clear that discussions on fundamental ethical questions must be given ample time in society and among stakeholders and should receive a wide consultation before coming to decision.

It is possible that the experience of this difficult public dialog has helped to create a more balanced discussion in other ethical issues. Last year a proposal on stem cell research was put forward. The process of discussion followed exactly the lines of wide consultation, without any pressure of time limits. The discussion was balanced and a bill was presented to the parliament based on this dialog. This bill has wide public and political back up and will most likely pass as a law in the next session of parliament.

Finally, the input and help from the WMA was most helpful. The organization is widely respected and was consulted by Iceland's health authorities, as well as by the Icelandic Medical Association. A mutual understanding was also reached that the outcome of the work of the WMA should guide further work on the database. As the database was never realized it is hard to tell what the practical outcome of this guidance might have been.

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Problems of Hungarian Health Care at the Turn of the Millennia

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Jenö JULOW*1

Brief General Information on Hungary

Hungary is a small (with an area of 93,000 square kilometres), geographically open and vulnerable country in the heart of Europe, somewhat developed (GDP per capita is USD 10,000). Hungary integrated well into the dynamic international scene and developmental processes across a wide technological, economic, cultural and political spectrum. Formerly the country belonged to the Soviet block. It regained its independence at the turn of the 80s and in the 90s, implementing strong political and economic reforms (republican form of government, multiparty parliamentary democracy, municipal governance, civil organisations, as well as adopting the system of market economy and an opening to export markets).

The country has re-forged its international ties as well (NATO, OECD and EU membership) including rebuilding its contacts with the quickly developing Asian region, Japan among them (technology and finance contacts, commercial ties, scientific and cultural relations).

Hungarians Are Unhealthy

The health indicators of the Hungarian population—for many decades now—have shown an extremely downward trend. In the matter of certain illnesses and causes of death the country is ranked very highly in an unfavourable sense on international statistics. In the "mortality rankings" the country is only preceded by Latvia and Estonia among EU member states in 2003. Of the world's 30 most developed countries (OECD) after Hungary it is only in Turkey that a newborn can expect to live a shorter life: they can hope for nearly 10 more years in Japan, the list leader, with 6 more years in Austria. Perhaps the most depressing fact: Hungarian men are first in the world, while women second in cancer deaths.

In Hungary every fourth adult and over half of those over 65 years of age suffer from hypertension. In 2003, the cause of death every other time was circulatory disease. In our country nearly 70,000 people have died as a result. Locomotor diseases cause half of all chronic illnesses for people over 60 years of age.

In 2002, psychiatric wards had 37,000 patients registered. Schizophrenia is a frequent illness. A serious depressive state afflicts over 15% of the population at least once during their lifetime. The bad health of the population translates into a huge challenge, economically and otherwise, and into diverse tasks for health care.

Why Is the Health of Hungarians So Bad?

Among developed countries we are second in the number of those who smoke regularly. Over half of the population is overweight, we don't exercise enough, we drink too much, we do not consume enough fruits and vegetables, but we consume too much animal fats. Every second Hungarian member of the workforce is subjected to significant, additional 40% intermediate degree stress at work, thus it is no surprise that every fourth worker suffers from hypertension!

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The Primary Characteristics of Hungarian Healthcare

Historically Hungary has a mandatory state-run comprehensive health insurance scheme. Basic care is provided by the network of family doctors (1,500 residential doctor zones). Ambulatory patient care is conducted by a regional network of clinics. In-patient professional care is implemented within hospitals with 450 beds each, comprising a regional network, and in leading national professional institutions. The number of institutions for the treatment of chronic ailments is inadequate, their development is pending. Twenty thousand licensed medications (4,000 from domestic sources) are provided for, with or without insurance company subsidy. The ownership situation is characterised by the dominance of state and municipal ownership; private ownership is of an ancillary nature (family doctors, dentists).

Financing is performed by the National Health Insurance Fund from employer and employee contributions. The private spending of the population is needed to pay for the price of medications, nursing fees and under-the-table payment to physicians.

Under-the-table payments or 'gratitude payments' are not customary in Western Europe. The situation in Hungary is similar to the situation in Japan, payment in money or in-kind is acceptable after the patient had been cured. The rationale for this practice is the shamefully low salary (the author of this article, after 40 years of neural surgery experience, earns 4 euros per hour as the head of his department). According to the president of the Hungarian Medical Association, the medical system is kept afloat by the under-the-table money and the population cannot be subjected to anymore expenses. The opinion of the doctors is that the physician must be compensated so that it isn't for money that he or she heals. According to the Attorney General, accepting under-the-table payments is a crime when it is specifically requested by the doctor. The offence of the doctor who requests money from his/her patient in advance, is punishable by imprisonment of up to 2 years, while a doctor who is caught engaging in welfare fraud, may be subject to 5 years of imprisonment.

On a government level, Hungary's health system is overseen by the Ministry of Health. Its task is the regulation and monitoring of health policy. The maintenance of institutions is performed by the municipalities, a difficult task due to serious funding shortfalls. Professional schools and universities prescribe the professional protocols that are required for the operation of the health system. The interests of medical professionals are represented by the Doctor's Association and Unions of Health Professionals.

The Current Problems of Hungarian Health Care

A serious problem of Hungarian growth is the inadequacy of the population's biological-physical reproduction. Due to natural attrition and modest immigration the population is shrinking. The birth rate is low, mortality figures are high, and the demographic structure is aging.

Structural, Task-Related and Operational Problems in Health Care

Changes in the structure of treating illnesses and the contradictions of the treating institutions were not resolved either during the years of socialism or after regime change. Currently the public at large perceives present reforms targeting these objectives as overly hasty. These are: a decrease in the number of beds, functional reorganisation, a transformation of the specific field (weighed and other institutions) and the development of institutions for the treatment of chronic illnesses. The level of technology and equipment is outdated at certain hospitals. In many hospitals where the laboratory is good, there may be an inadequately equipped x-ray lab, in others, where there are good surgeons and the equipment in surgery is adequate, the pathology unit has problems.

The current primary problems of Hungarian healthcare are the high costs, overspending by the health insurance scheme, the debt-burdened hospitals, the overworked doctors and the rising drug prices. A large percentage of Hungarian doctors are of the opinion that the continuing lack of capital is making it impossible in state and municipal hospitals to finance development, to improve competitiveness and quality.

According to Japanese working in Hungary, our hospitals, despite performing patient care at

a high level, are disorganised, the emergency rooms and patient rooms that are used to receive patients for the most part are outdated and neglected. The municipalities of small towns, due to prestige reasons, purchase overly expensive and in this structure unnecessary equipment that they are unable to operate (CT-PET). The network of emergency departments is underdeveloped. Currently 147 hospitals possess active beds—of these hospitals, 96 institutions have an intensive care unit. According to the data for May of 2004, in Hungary 23 hospitals have an operating emergency unit (SBO), in addition to which another 64 emergency ambulatory units also operate. It is a fact that the system of emergency patient care barely covers half the country. The number and geographic location of ambulance stations does not enable arrival within 15 minutes on a national level.

Basic medical care provided (by attendant physicians) is not centralised in many places. Either the doctor of one or another village is the attendant physician. Often the patients don't even have a telephone to contact the attendant physician.

The Japanese social historian Morita Tsuneo, very knowledgeable on Hungary, wrote a dramatic article in the periodical Élet és Irodalom (Life and Literature) titled "Pragmatizmus és populizmus—A Kádár-rezsim két öröksége" (Pragmatism and Populism—the Two Legacies of the Kádár Regime). Morita Tsuneo, on the basis of the passionate recounting and experiences of Japanese living in Hungary, assigns hospitals into the class of institutions that he would like to visit least of all. The typically COMECON style service methods at the hospitals did not change after the regime change. "It is inconceivable that despite the extremely high health contributions why the Hungarian hospital and health care in general is working so badly," he writes.

According to Morita Tsuneo, the essence of the Hungarian hospital problem is the lack of an independent management body. In opposition to this idea—this is the author's opinion—is the professional conscience of more experienced Hungarian doctors, their "Hippocratic oaths," basically incompatible with the "dictatorship" of economically motivated management—the older doctors view this as anti-patient.

The Problems of the Physicians

In Hungary 32,000 physicians work in hospitals and in basic medical care. Due to the low numbers and the necessity of supplementing their incomes, doctors must take on a great deal of attendant-physician on-duty work. Statistics show that with overtime today an average doctor works 64.8 years equivalent, on the average, during their 40 year long active career spans. "The health of doctors is 8–10% worse than that of the Hungarian general public, pretty bad to start with," says Dr. Géza Gyenes. "Their average lifespan is also lower." Also, without replenishment, certain specialists will simply disappear from Hungary: currently there is a gap of 4,500 doctors, if this number reaches 6,000, the system will collapse.

A Hungarian doctor can earn 15 times his/her domestic salary in Western Europe, and he/she need to take on less extra duty/overtime, without having to struggle within the system of under-the-table payments; he/she is also greeted with open arms. In addition to the Scandinavian countries, Great Britain, Germany and France also gladly receive Hungarian doctors.

For a large proportion of older doctors a HUF 400,000 salary (appr. USD 2,200) is just a pipedream. Over a thousand have asked to have their medical degrees accepted abroad after the accession to the European Union, with 430 of this number already working abroad. The salaries abroad are eight to 10 times what they are domestically. Annually 300–700 Hungarian doctors go abroad to work and 120 arrive to replace them from surrounding countries.

If this trend does not change within a few years, hospitals may be closed down due to an insufficient number of doctors. Already in east and northeast Hungary a number of hospitals were forced to shut down certain departments due to a lack of doctors.

The problem is endemic to all of Eastern Europe. Over the next 5–10 years they are expecting 10,000 medical specialists in Austria and also many thousands in England and France from other countries of the Union. Poland, Lithuania and Latvia are concerned that too many of their best people are leaving the country in the hope of higher salaries and a better life. According to the manager training survey in

Budapest, two thirds of newly graduated resident medical specialists would like to work abroad and a third has already engaged in negotiations concerning a specific position. At the same time, practicing physicians who already have families are leery of changing their address.

We Also Have a Growing Shortage of Nurses

In Hungary, an estimate of the number of medical professionals is around the 100,000 mark, while those nurses working immediately besides the sickbed number around 53,000–55,000. The former category includes, in addition to "nurses," ambulance officers, pathologists and the members of numerous other professions. In our country for every 100,000 residents we have 281 nurses, while in Portugal that figure is 358 (in a number of countries they also classify into this category such (professional) workers who would be designated in our country as members of a different profession).

Approximately 3–3.5% of nursing positions are unfilled, meaning there is a shortfall of 3,500 to 4,000 nurses. In ambulatory patient care, in the field of specialist assistants, institutional managers have reported a 28% shortage and a 15% shortage for general assistants. A shortage of 15% also exists for professional workers with university degrees. The overworked nature of the nurses is best shown by the number of patients per nurse. The situation is worst in the treatment of chronic ailments, where often a single nurse takes care of 40–50 patients. This can turn the notion of quality work into a doubtful proposition. In Hungary a significant portion of nurses have a (monthly) salary in the range of gross HUF 90,000–120,000 (USD 430–700). Forty-eight percent of the assistants working in ambulatory patient care have salaries in the gross HUF 90,000–120,000 range, while 35% have gross incomes of less than HUF 90,000. In the United States a salary of USD 4,000, meaning approximately HUF 806,000 await nurses with a sense of entrepreneurial spirit. In America there are 1.5–2 health workers for each patient. Knowing the level of skill of the Hungarians, they are particularly glad to see Hungarian nurses. An even greater exodus, fortunately for us, is inhibited by the lack of English language skills.

Solutions

In the system of indicated problems and contradictions, an optimal solution still requires a consensus of interested parties. Professional goals and political approaches stand at odds. What is the correct path, radical changes or gradual improvement? In addition to the currently outdated hospital structure, the system cannot be funded anymore. The government, meaning the governing socialist-liberal coalition, is offering to solve the financing difficulties by the introduction of competing private insurance companies.

Funding can be improved by increasing financial interest, by increasing efficiency at the institutions and at the insurers (private insurance carriers?).

The fixing of health and demographic problems can only be implemented in the long term in the framework of long-term population policy, family policy and health policy programmes, by harnessing international experience, via public debate and governmental reform programmes.

Current Changes

From February 15th onward, when visiting a family doctor or a specialist, a large proportion of adult patient citizens must pay a visit fee; for a hospital stay, a daily fee must be paid. The visit fee per occasion is HUF 300 (the price of 0.5 litre of beer). The most often referenced reason for the introduction of the visit fee is the elimination of the under-the-table gratuity. According to the government many have wriggled free of the obligation to pay their health contributions and people have gone to see the doctor a great deal more than genuinely warranted. Medicine consumption also exceeded rational levels. To cure this state of affairs, from April onward the majority of services could only be utilised in consideration of duly paid medical contributions, as a function of medical insurance coverage. Without it, only ambulance services, life saving interventions, and of epidemics related services only vaccinations and screenings will be provided.

From available funding the state can only guarantee the modern and effective treatment of serious and life threatening illnesses if it saves on the treatment of less serious diseases. Hospitals must keep a waiting list for the operation

of chronic diseases. The system of leading, complex care providing, high quality hospitals has been developed. The current merging of large Budapest hospitals will eliminate parallel services, but ingrained habits and the fear of losing senior management positions is a barrier to correct policy decisions.

Emphasised development programmes (screening programmes, institutional network, instrumentation, etc.) have been launched in the interest of treating tumours and circulatory diseases.

During the period of the second National Development Plan, between 2007 and 2013, in addition to quality improvements, the development of the emergency system shall be finished, providing equal opportunity for treatment for all affected patients. Overseeing the health insurance authority will be transferred to the newly established State Health Insurance Directorate, the supervision of service providers, the adjudication of appeals and complaints made against decisions associated with various fees.

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Harmonization of Research Ethics Committees—Are there limits?

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Biomedical research involving human subjects has to respect their autonomy, dignity, identity, integrity and other rights and fundamental freedoms. Research ethics committees, initially established at the request of national authorities such as the National Institute of Health (NIH) in the late sixties in the USA, the "Deutsche Forschungsgemeinschaft" (DFG) 1973 in Germany and since 1975, part of the Declaration of Helsinki, are universally charged with safeguarding these rights.

Biomedical research while initially performed more on a national level, is increasingly spreading out on an international or even intercontinental field. For this reason researchers and research institutions, including the pharmaceutical industry (in research a very important global player) have for a long time stressed the need for the harmonization of the decisions and the procedures of research ethics committees. The main argument concerns the suggestion that there should be only one "medical ethic" in a country, in a continent or around the globe. On the basis of this assumption, all legal obstacles causing diversity of ethics committees, such as different compositions, different kinds of financing, different ways of decision making etc. should be abandoned in favour of a "unique, harmonized research ethics committee procedure." Are these arguments applicable? Is the diversity of ethics committees in different countries or in unions of states justified, or only superficial?

First of all it must be recalled that the main task of an ethics committee is the multidisciplinary assessment of the ethical acceptability of an envisaged research project. This raises the question of the character of ethics and its so often requested worldwide uniformity.

Ethics is, at least in the circles of experts, understood as a part of philosophy. Following this view it has served, since the age of Aristotle, as a method of analysing whether the handling of human beings by researchers is acceptable or not, as being "good" or "bad." The methods of this analysis can be harmonized, such as the examination of the scientific merit of research projects or of their accordance with national or international law. If there are positive answers to these questions, then the decision on the ethical acceptability is based on the question of "good" or "bad." For the terms "good" and "bad" there are no definitions accepted worldwide. They are moreover influenced by religion, tradition or even different philosophical schools, which may differ even within a country and of course, within the different regions of the world.

A recent example is the worldwide discussion on the use of human embryonic stem cells for research. Even in those countries where the need for such type of research is accepted, the ethical analysis, as mentioned above, may lead to the view that it should not be performed, as it is considered to be "bad."

In the discussion on the ethical acceptability of medical research, the expression "medical ethics" is widespread, assuming that in this way the diversity of ethics, as marked e.g. by utilitarism or transcendental ethics in the sense of Immanuel Kant, could be overcome. This attempt needs consideration as to whether the term "medical ethics" is appropriate or not. The known general ethical principles such as respect for the human being,

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beneficence, non-maleficence ("do no harm") or justice, are basic and leading guidelines for the whole life of human beings in society. They may be, in an appropriate way, applied to special fields e.g. banking, or even medical research. Everybody understands, that in financial transactions the principles "do no harm" or "justice" are obligatory to prevent any kind of betrayal or deception of the person concerned! The adaptation to special sectors may not deviate from the basic concept of the relevant ethical principles.

The use of the term "ethics in medicine," used by preference in some circles rather than "medical ethics" is more than a semantic suggestion. It underlines this general approach to ethics and is therefore much more appropriate than "medical ethics," which can be misunderstood and should be avoided, at least in multidisciplinary discussions. It follows from these considerations that ethics in medicine, so far as analytical methods are considered, may be harmonized. The basis of the decision to be taken by research ethics committees—"good" or "bad"—, cannot be standardized or harmonized. Any other outcome would be surprising, implying the same definition for "good" and "bad" around a world with differing religions, ethics, differing cultures/social patterns etc.

In contrast, by long tradition, discussions on "good" and "bad," and conclusions on a regional level, are the basis for moral guidelines in any specific society. Professions such as lawyers or physicians, are entitled to contribute to these discussions and decision making for such an ethnic entity. But no professional group has any right to prescribe in isolation regulations for that entity. This is another argument against professional based ethics or morals as binding provisions on all. Since in the work of professions the rights of others have to be respected, profession-linked ethics are not necessarily appropriate outside the profession.

Unavoidable diversity is the principal obstacle to any kind of harmonization of research ethics committees other than the process leading to a decision; the decision itself is not open to standardisation! Research ethics committees are, at least by tradition, embedded into a national framework, which itself is influenced by religion, history, tradition and the system of legislation of that country. In practice the protection of human rights and fundamental freedoms (even when, as in most cases, it is guaranteed by the constitution of the state) may be influenced by juridical decisions of courts competent for constitutional law in different ways. There may exist on that basis a diversity of interpretations of e.g. "free informed consent" or conditions of its expression such as "substitution" in place of consent of persons not able to do so, of data protection, etc. Relevant decisions of the courts and national legislation have to be followed in the regulation of ethics committees and their work. These differences appear even in regions of the world with more or less common traditions.

In preparing the Directive 2001/20/EU, the European Union tried to harmonize at least the administrative part of ethics committees. These attempts failed, and everybody knows the results: Member states are obliged to establish a system of research ethics committees which have to consider the usual international principles of ethical assessment and to make a decision within a given time. Nothing is said, for example, about conditions or interpretation of "free informed consent" in a normal situation, or in research in an emergency situation. The diversity in ethics has been identified as the main obstacle to any kind of harmonisation or standardisation of the work and decision making of research ethics committees. The diversity in legal and administrative provisions for these committees, themselves caused, at least in part by the ethical diversity, constitutes a second obstacle.

It is understandable, that researchers and research institutions or sponsors (such as the pharmaceutical industry) are faced with that situation and have a special interest in overcoming it or at least living with it. In an attempt to help in this situation, the European Forum for Good Clinical Practice (EFGCP) recently published an overview of the "Procedure for the ethical review of protocols for clinical research projects in the European Union" (International Journal of Pharmaceutical Medicine, Vol. 21, No. 1, 2007). This publication gives an excellent overview of the ethics review systems in 26 European Union countries plus Switzerland and Norway. The report provides an excellent overview showing different interpretations of the directive 2001/20/EG by the member states of the European Union. In this way it assists researchers to prepare multinational research projects within the Union, while respecting national provisions.

From the Editor's Desk

WMA General Assembly, Copenhagen 2007

The WMA General Assembly was held from October 3 to 6 in Copenhagen. It was a huge meeting, with attendance greater than usual for such events and the number of council members also increasing from 18 to 21. The assembly was held at a hotel situated on the banks of a canal with fine views, and we were blessed with fine weather throughout our stay.

The country of Denmark has one of the most advanced systems of social security, including medical and nursing care insurance. Moreover, the venue of the assembly, Copenhagen, is a city with a truly beautiful and tranquil environment, providing a rich cultural background from its literature, music, fine arts, and architecture to its cuisine. A bronze statue of the world-renowned writer of children's stories, Hans Christian Andersen is situated in the center of the city. It was also a tremendous thrill to actually see the seaside area of Neuhavn that was depicted on the Royal Copenhagen Year Plate for 2007. We enjoyed various dishes of herring at a restaurant in Neuhavn from which we could see the room where Andersen lived.

A bronze statue of Hans Christian Andersen

Neuhavn, Copenhagen

The Copenhagen Opera House—designed by Henning Larsen, an architect who is also famous for designing the Sydney Opera House, which was recently designated as a world heritage property—was an extremely modern structure. The very modern interior featured lavishly used Danish wood paneling that harmonized elegantly with the performance of "La Boheme" that we were fortunate enough to attend. The Opera House was designed by taking in its surroundings, like a traditional Japanese garden.

As physicians, our profession requires us to respond to high demands at all times. I was most satisfied with the successful results that we were able to achieve in this WMA General Assembly, although it was a hard schedule, through the passionate and sincere discussions involving all participants.

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