Although the proportion of older people living with any child has decreased substantially, the proportion is still about 40% and is still perceived as the normal mode of family caring. Conservatives view this sort of caring as embodying Japanese family values, whereas feminists view it as exploitative. The view of care from the daughter-in-law as exploitative prevailed, and as a result LTCI in Japan seeks to relieve the burdens on family carers by replacing some of their duties with formal services, thereby giving them more choice to work or pursue other interests.

This policy contrasts with German cash allowances, which are intended to support traditional values by rewarding and encouraging family caring; Germany also covers carers' pension contributions and offers vacation time, similar to paid employment.[36] However, the amount of the allowance in Germany and all other nations that offer cash for care is much less than the wage from employment. As a result, family carers receive a meagre income while undertaking increasingly time-consuming and psychologically burdensome tasks with no opportunity to build a career.[26]

However, Japanese LTCI does not fully liberate Japanese family carers. Putting the parent in a nursing home would alleviate most of the burden, since that is seen as transferring the total responsibility, which helps to explain why demand for institutional beds soared when LTCI was initiated. The government was not willing to subsidise such high-cost care by building more nursing homes, resulting in long waiting lists.[57] Family carers could rely only on home help, day care, and other home and community-based services, which could never be enough to relieve the burdens so long as caring is regarded as a full-time duty. This tenet helps to clarify why dissatisfaction with long-term care policy persists among many women. Japan actually has a higher institutionalisation rate (about 5·5% of the 65 years and over population) than the OECD average (3·3%).[58] At-home services are far more available in Japan than almost anywhere. However, many family carers are influenced by the expectations embodied in traditional family values as well as hoping to be liberated from them; in our view, a long-term care policy that does not provide a solution for this dilemma cannot be fully successful.

Still, the LTCI programme itself brings about new attitudes. Traditional Japanese family values dictate that a self-respecting *yome* would not allow a stranger into her house to give care, much less send her *shutome* to day care. As formal services expanded these forms of care became common and were accepted, even in the most old-fashioned rural areas.[59,60] Over time, the old-age population includes increasing numbers of the baby-boom generation, who have very different life experiences and expectations, including views on independence. Moreover, while the carer's dilemma in Japan is particularly acute, it does not differ fundamentally from that of family carers everywhere. Most feel burdened by their tasks but continue to care because of affection and a desire to help on the one hand, and a sense of duty and social pressures on the other. Effective long-term care policies alleviate but cannot obliterate these feelings.

Challenges, responses, and recommendations

In a sense, Japan's LTCI programme has already mastered its biggest challenge, which was simply getting such a large and innovative programme underway. At its inception many observers were not at all optimistic: a 2000 article in *The Lancet* was titled "Chaos greets birth of insurance system for Japan's elderly".[61] Actually the programme was set up quickly with few administrative difficulties, and it has become an accepted and highly supported component of Japan's social policies. None-the-less, unsolved problems and other challenges must be addressed.

The empirical evidence that LTCI has relieved carer burdens is scarce, and despite the popularity of the programme, it is commonly criticised for not doing enough. Clearly the problem is not limitations on services. Some people are eligible but use no services at all, and on average recipients of home-based care choose to use only 40–60% of their entitlement. The 10% co-payment inhibits use to some extent; someone with a moderate level of disability using half the entitlement might pay about US$150 a month and might not want to increase their expenditure. However, since the monthly contribution to LTCI for low-income people is capped (and for those receiving public assistance, services are free), out-of-pocket costs would not seem to be a major barrier against receiving more services for many people (figure 2).

A reason for continued dissatisfaction might be a shortage of specific services that are particularly important to carers. Originally, visits by home helpers at night were supposed to be continually available ("anytime, anyplace" was the slogan) but areas where agencies provide it are scarce because this service is financially and logistically difficult to provide, despite government efforts. Respite care, or short-stay—a few nights at a time in a nursing home—is widely used (350 000 stays per month)[31] but the number of institutional beds is not adequate because of high demand, so appointments need to be made weeks in advance in many areas.

How should the government respond? Provision of more night visits and respite care, and help for carers to maintain a good work–life balance by making care leave from companies more available, would be helpful. Beyond that, Japan needs additional services aimed specifically at helping family carers: daughters and daughters-in-law, and also spouses who are elderly themselves.

Two directions are promising. First, results of meta-analyses indicate that psychosocial interventions can be effective in improving carer morale and relieving depression and stress.[62,63] Japanese carers have many opportunities for getting information and advice, but formal counselling is rare; there are few trained professionals, and reimbursement under health

insurance is too low. We recommend that professional counselling services for carers be developed, although not necessarily within the LTCI framework.

Second, carers would benefit from closer ties to neighbours and local people in similar situations, and some long-term care programmes would be more effective if channelled through community organisations. Recent initiatives include small-scale multifunction centres, which combine day care, respite care, and limited home help to a group of recipients living in a small area, with family members and other residents involved. Community comprehensive assistance centres deal broadly with ageing and caring issues, including care management for light-care cases, dealing with elder abuse, and linking with local social organisations; these centres should be developed further.[25] Public and community leaders have been mobilised to form so-called dementia supporter networks in many localities. We recommend more community-based efforts.

Our analysis showed that the introduction of LTCI led to more jobs and increased work hours for carers in upper-income households, but not middle-income and lower-income households even though the time devoted to caring decreased. Women from lower-income households worldwide face barriers to getting the best jobs, but this tenet has been especially true in Japan.[64] Although long-term care policy cannot have a major effect on labour market inequalities, modest reforms can be helpful in some cases. For women who want to build a career, specialised employment training should be made available, perhaps coordinated with the older person's day-care schedule. Such training might be crucial when the older person dies or is institutionalised. The more typical middle-aged and older-aged family carers need more opportunities to get good part-time jobs. The LTCI system itself has been a major provider of jobs for women, many of whom have trained for certification as careworkers and other roles. From 2000 to 2010, the number of certified careworkers increased from 210 000 to 900 000, and that of certified social workers from 24 000 to 134 000.[65]

Japan's comprehensive LTCI programme is necessarily expensive, and keeping costs manageable has been a constant preoccupation of the government. Figure 3 shows that total spending rose rapidly in the first 5 years.[66] By 2005, yearly expenditure (excluding the 10% client co-payment) had risen to about ¥5·5 trillion (US$44 billion at purchasing power parity), roughly 20% higher than originally forecast. The larger than expected increase was due to greater than expected enrolment as a result of the liberal eligibility criteria (two-fifths of those certified would not have been eligible if German enrolment criteria had been applied). This trend was unsustainable, but the most direct remedy, tightening eligibility standards to lower enrolment, was not politically feasible.

The government's solution was to introduce a scheme to place the lowest need people (about 25%) into a new programme of preventive caring, with various restrictions that made it both less expensive for the government to provide services and less attractive for recipients to use them.[25] As a result, both enrolment and spending in low-care groups, which had been growing rapidly, decreased slightly in 2006, and then remained about level. The core of the LTCI programme was not changed much: people with the greatest care needs living at home were not affected at all, and those in nursing homes took on a bigger share of room and board costs than before (although many were exempt because of low incomes).[25]

After 2006, total enrolment and expenditure began to increase again (figure 3).[66] This trend was inevitable, because the proportion of older people continued to increase while the benefit structure and eligibility criteria stayed the same. However, the 2006 reform seems to have achieved a successful structural change (figure 3).

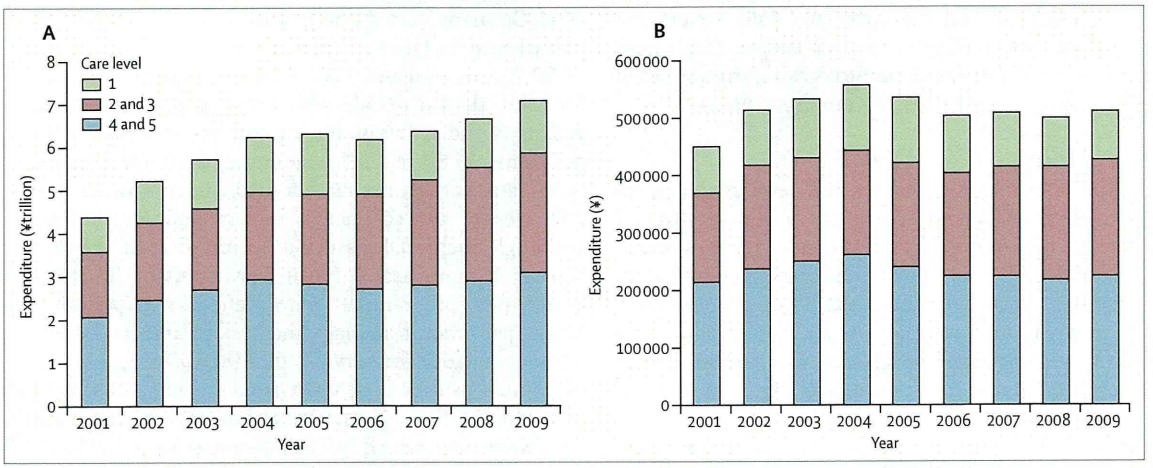

Figure 3: **Japan's long-term care insurance expenditures**
Overall (A) and per individual aged 75 years and older (B). The expenditures shown include the 10% client co-payment. Data from Ministry of Health, Labour and Welfare.[32]

Spending per person aged 75 years or older (the highest users) decreased from 2004 to 2006, and then plateaued. Growth in spending was now the sole result of increases in the size of this age group.[2,66] Constraining spending more severely would require cutting coverage, benefits, or both, which would be quite difficult. An effort to distribute the burden differently between age groups or between tax and premium revenues is more likely.

Although the percentage of older people in the population will continue to rise until the mid-21st century, because of the shrinking younger population, the absolute number of people aged 65 years and older will level off in around 2015 and from around 2025 for those 75 years and older. Thus, the next 15 years are a crucial period, when the direct costs of supporting older people will grow rapidly. Note that total government revenue (mainly taxes and social insurance premiums) in Japan was 33·5% of gross domestic product in 2007, which was lower than the USA (34·0%) and well below the UK (41·4%), Germany (43·9%), France (49·6%), and Sweden (56·3%).[67] The key to dealing with the costs of long-term care and other supports for older people, not to mention quite a few additional national problems, is for Japan's public financing to become more in line with other developed countries.

Other problems, although serious, are more or less the same in Japan as elsewhere. The first problem is Japan's over-reliance on institutions, which are expensive and are regarded as offering poor quality of life; specialised housing (assisted living) can help but is only now gaining credence in Japan.[25,29] The second is human resources: careworkers everywhere have lower pay, more difficult working conditions, and lower chances of promotion than do workers in other specialties. More careworkers are needed every year but they are difficult to recruit and retain. Third, coordination needs to be improved between the quite different sectors of long-term care and medical care, from the level of serving individual clients or patients, through to institutions such as hospitals and nursing homes, up to national planning and management. Both sectors are crucial for provision of good care, but cooperation is hard to achieve. Specialists in all countries can learn from each other about solutions to these common problems.

Lessons for other countries

Policy makers in both developed and developing nations can benefit from Japan's experience in initiating one of the world's most comprehensive long-term care systems to cope with the world's most rapidly ageing population. South Korea and Taiwan have started or planned long-term care programmes largely on the basis of the Japanese approach, and specialists from countries with developed systems have been looking into specific Japanese innovations.

Unlike nations that rely on cash for care in long-term care policy, Japan provides formal services only, on the grounds that family carers benefit most by direct help with their tasks, and that quality of care is best assured by relying on trained, licensed, and supervised careworkers. In particular, with extensive day care, many frail older people regularly get out of the house, socialise with peers, participate in activities beneficial to health, and are monitored by staff while their family carers have some time off. Evidence from Europe indicates that nations that provide only services have a more egalitarian or progressive pattern of care provision than do nations that rely on cash allowances.[26,36] Although cash for care is often regarded as cheaper, Japan, even with its far higher coverage and benefit levels, spends only about 30% more on home-based care than does Germany (figure 1).[28] The South Korean Government essentially opted for a services-only strategy after careful investigation of long-term care systems around the world, and specialists in Taiwan hope to implement a similar system.[68,69]

In Japanese home-based care, recipients choose the services that they want, up to a limit determined by the level of physical and mental impairment, and they also choose providers. Providers are licensed and supervised by local government, but the main mechanism for quality control is consumer choice, since providers can easily be changed. Nearly all recipients choose to have a care manager, who can provide expert advice at no out-of-pocket cost. Care managers come from related occupations, and must pass an exam and complete a 44 h training course. They are employed by a specialised agency or, more often, a service provider; despite early worries about conflicts of interest, most seem to serve the clients' interests well in practice. Their main tasks are to coordinate with other providers (particularly family physicians and hospitals), manage service provision and reimbursement, and help recipients and carers to make decisions. Care managers are not trained for counselling and, with a normal caseload of 30 clients, they do not have much time for it, but qualitative research suggests that many carers share their individual problems with their care managers and value the interaction.[70] In July 2008, Germany started a programme of care management partly based on Japan's experience.[30,68]

The fact that Japan's LTCI system has performed well for more than a decade with few changes in its basic design is indicative of the careful preparation by the government. Since the programme is comprehensive, systematic data gathering can facilitate comparisons of effectiveness and cost across regions and programmes (although such analysis could be improved if the data were in a more usable form). Having many functions under one programme allows effective supervision. Municipal officials manage the system and have some scope to balance the services that they offer against the premiums paid by their older residents (a sixth of their expenditure). Every 3 years each municipality has to draw up a work plan, which has also become the occasion for national reassessment and reforms, accompanied increasingly by debate among practitioners, experts, and

interested citizens. This triennial cycle has allowed many small adjustments, such as balancing the fee schedule for services, and even as big a structural reform as the lower-cost preventive care system initiated in 2006.

Most long-term care programmes also cover younger disabled people. A so-called age-blind policy is attractive in principle, and if the programme centres on cash allowances young and old can be treated similarly without many difficulties. However, the needs and preferences of most frail older people and their families are quite distinctive; most younger disabled people want employment training, a normal independent life, and control over the organisations serving them. The Japanese approach, with formal services designed specifically for older people (with separate programmes to serve younger disabled people), is more effective and efficient, and is the direct solution to the difficulty that governments most worry about: how to deal with the increasing numbers of frail older people.

Contributors

All authors contributed to the study concept, design of the report, data analysis, and interpretation of the results. NT, HN, JCC, and AN provided the outline and JCC drafted the report. HN, NT, and AN were responsible for empirical analysis and synthesis of findings. HH, MRR, KS, NI, and IK contributed to drafting and critical revision. All authors contributed to the discussion and have seen and approved the final version of the report.

Conflicts of interest

We declare that we have no conflicts of interest.

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Japan: Universal Health Care at 50 years 5

Re-invigorating Japan's commitment to global health: challenges and opportunities

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Over the past 50 years, Japan has successfully developed and maintained an increasingly equitable system of universal health coverage in addition to achieving the world's highest life expectancy and one of the lowest infant mortality rates. Against this backdrop, Japan is potentially in a position to become a leading advocate for and supporter of global health. Nevertheless, Japan's engagement with global health has not been outstanding relative to its substantial potential, in part because of government fragmentation, a weak civil society, and lack of transparency and assessment. Japan's development assistance for health, from both governmental and non-governmental sectors, has remained low and Japanese global health leadership has been weak. New challenges arising from changes in governance and global and domestic health needs, including the recent Great East Japan Earthquake, now provide Japan with an opportunity to review past approaches to health policy and develop a new strategy for addressing global and national health. The fragmented functioning of the government with regards to global health policy needs to be reconfigured and should be accompanied by further financial commitment to global health priorities, innovative non-governmental sector initiatives, increased research capacity, and investments in good leadership development as witnessed at the G8 Hokkaido Toyako Summit. Should this strategy development and commitment be achieved, Japan has the potential to make substantial contributions to the health of the world as many countries move toward universal coverage and as Japan itself faces the challenge of maintaining its own health system.

Introduction

With less than 5 years to achieve the Millennium Development Goals (MDGs) and an ever-increasing array of post-MDG challenges, such as a rising proportion of elderly people worldwide and the non-communicable disease epidemic,[1] the worldwide community is in need of a new strategy for global health. Increasingly regarded as crucial to sustaining and expanding present global health efforts, the movement toward universal health coverage has been rapidly gaining traction in recent years, prompting WHO to make it the focal point of its 2010 world health report.[2–4]

However, seeking to provide affordable access to appropriate health services for all is an ambitious undertaking and will need a change in our understanding of global health, as recently put forth by Koplan and colleagues[5] and Frenk.[6] With restricted time and resources at our disposal, global health cannot simply be viewed as resource transfers from rich to poor countries. Instead, global health, defined as issues that directly or indirectly affect health but can transcend national boundaries, now needs real mutual partnership, a pooling of experience and knowledge, and a two-way flow between developed and developing countries. These needs are especially relevant if we are to successfully progress toward universal coverage, which will need the adoption of what Frenk calls "a process of shared learning among countries",[6] whereby countries work together to expeditiously establish best processes for achieving universal coverage—a crucial effort that this Series in *The Lancet* aims to start through the lens of Japan.

Key messages

- Health is an important priority for Japanese people in domestic and foreign policy.
- There is a gap between the Japanese public's foreign policy priorities and how Japanese foreign assistance is allocated in reality. Although greater than 70% of the Japanese public rated health as the most important priority for Japanese foreign assistance, the Government of Japan only spends 2% of its total official development assistance on health.
- This priority gap exists because of substantial government fragmentation, a weak civil society, and a lack of transparency and assessment.
- Japan's health expertise in achieving some of the world's best health outcomes and universal coverage is underused in tackling global health challenges.
- Japan can overcome obstacles to effectively share and transfer its diverse national health expertise in pursuit of global health by establishing a high-level governmental global health committee, increasing its financial commitment to global health, promoting innovative initiatives in the non-governmental sector, increasing Japan's research capacity, and developing Japanese global health leadership.
- Japan should be more regionally engaged in helping developing Asian countries achieve universal health coverage and the Millennium Development Goals given its shared historical, geopolitical, and economic experiences.

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This is the fifth in a Series of six papers about Japan's universal health care at 50 years

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See Online for webappendix

As a healthy and prosperous country ranked first in the world in terms of life expectancy,[7] Japan is uniquely positioned to share its technical expertise and experiences in domestic health provision with the global community in pursuit of better global and regional health outcomes. Although Japan's achievements in domestic health are not necessarily directly attributable to strategic, evidence-based policy making, much can be learned from Japan's accumulated experience over five decades of providing universal insurance coverage, long-term care,[8–10] and some of the world's best maternal, newborn, and child health care.[11] However, to convey these lessons to the worldwide community there is need for substantial funding, a rigorous system of assessment, developed human resources in global health, and effective bridges between Japan's global health community and its domestic health experts—the gatekeepers of Japan's accumulated health knowledge and experience. However, so far, all of these inputs have been lacking in Japan's approach to global health.

Burdened with new domestic challenges such as a rapidly growing elderly population, soaring budget deficits, low economic growth, and a recent national disaster,[12] Japan is now at a turning point in terms of redefining its commitment to and strategy in global health. Will it be able to fulfil its responsibility as a citizen of the global community to share its vast knowledge and expertise in health care?

Our aim is to show how Japan can be a more effective contributor in the pursuit of global health. We recognise that, in the 21st century, addressing global health challenges increasingly needs attention to be paid to many issues beyond health care, ranging from environmental pollution to food safety. However, a discussion of Japan's engagement on such issues is beyond the scope of this Series, which focuses on the issue of universal coverage. Consequently, we will specifically address how Japan can more effectively leverage and transfer its accumulated expertise in domestic-health provision into the global health arena. We first review Japan's health diplomacy contributions up to now and assess Japan's core competencies and limitations in global health.[13–15] We conclude with key recommendations on how Japan can strengthen its commitment to and effect on global health in addition to a new Japanese vision for regional and global health engagement.

Search strategy and selection criteria

To establish the nature and extent of Japan's commitment to global health, we used three separate but interlinked research strategies. First, we systematically reviewed published work to identify the key aspects of global health, Japanese policy in global health, and the level of public support in Japan. Our search terms included "Japan*, Nippon, Nihon", "assistan*, don*, aid", "health*, water, sanitation, hygien*", "education", "view*; opinion", "competen*, limitation*, advantage*, disadvantage*, strength, weakness", and "definition*". Our search strategy involved keywords in both English and Japanese. We included any comparative study that included interventional and observational aspects of Japanese development assistance for health. We excluded published work that considered development assistance as a whole, by other countries, or both. Our search strategy involved a search of databases, including Medline, the Cochrane Library, Embase, POPLINE, African Health Line, and LILACS; a search of the websites of various Japanese ministries, the Organisation for Economic Co-operation and Development (OECD), the UN, other international organisations, bilateral agencies such as the Japan International Cooperation Agency (JICA), and other sites identified during the search process; a search of the bibliographies of research reports identified by the above methods for reference to other studies suitable for inclusion; contacting the authors of key reports for information about other studies missed by the above methods; and contacting known or recommended experts in the specialty. Published work we identified was critically appraised by RL, RM, and SK. All disagreements were resolved through a process of discussion with the other co-authors.

Second, we did a descriptive analysis of Japan's development assistance for health with data from the ministries of foreign affairs, health, labour and welfare, finance, and education, science, and technology; JICA; Japan Federation of Economic Organisations; the MOFA-NGO Regular Meeting Network on the Global Issues Initiative on Population and AIDS and the Okinawa Infectious Diseases Initiative; and other agencies. We reviewed and assessed the datasets rigorously for their quality, consistency, and comparability within the framework of internationally comparable development assistance for health. We also used other publicly available data from the Institute for Health Metrics and Evaluation and the OECD Development Assistance Committee to assess trends and make international and intersectoral comparisons.

Finally, we supplemented our search with results from a new national survey on general official development assistance, which sought information about public attitudes toward Japanese global health policy. This survey was administered by the Cabinet Office between June 17 and 27, 2010. We employed a two-stage stratified random sampling process to obtain a nationally representative sample with the most recent national census. Face-to-face interviews were done by members of a research firm with experience in public-opinion polls. The survey included a module about the public's view of Japan's contributions to global health (webappendix).

Japan's global health framework

Origins of global health diplomacy

After the end of World War 2, Japan was left in search of a new foreign-policy direction.[16] No longer able to maintain military forces because of the constraints imposed by its pacifist constitution after the war, the Japanese Government decided "to contribute to the peace and development of the international community".[17,18] This foreign policy shift was both motivated by humanitarian considerations as well as an understanding that, in our interconnected world, Japanese security and prosperity is invariably tied to the development and stability of developing countries.[19] Since then, Japan has pursued peacetime development through its official development assistance programme (ODA), which has been used to serve varying Japanese interests over the years.[20]

While Japan was developing economically in the 1950s and 1960s, Japanese ODA was tied to the purchase of Japanese products, thereby expanding Japan's export market while simultaneously providing assistance to developing countries.[21] However, starting in the late 1970s and progressing into the 1990s, Japan began using its ODA to promote closer ties with its Asian neighbours

and to increase Japan's power and influence in the world at large, much like China is doing now.[20,22] These efforts were characterised by a substantial increase in ODA in the 1980s and 1990s, which ultimately led Japan to become the largest ODA donor in the world between 1991 and 2000.[20]

For many years, Japanese ODA was geared towards peace building and geopolitical activities.[21] However, in 1998, realising that sustainable "economic growth and human development require not only political stability but other favourable...social factors as well,"[23] the Japanese Government adopted human security as the cornerstone of its foreign policy, which expanded the scope of Japan's ODA to other humanitarian concerns. Seen as an integral part of promoting one of the fundamental tenets of human security—freedom from want—health came to be viewed as an indispensable part of Japan's development assistance.[24]

Players in global health

Less than a decade after the devastation of World War 2, in 1954, Japan emerged as an ODA donor country on joining the Colombo Plan, an intergovernmental initiative that provided aid to developing Asian countries. At the time, the country was fragile, the economy had still not recovered, and Japanese society was tirelessly rebuilding itself. With most of the country's attention focused on its own domestic development, the Japanese Government emerged as the dominant player in implementing Japan's global health agenda, coordinating primarily with major international organisations, such as UNICEF and the World Bank.

Japan's own bilateral development agency, the Japan International Cooperation Agency (JICA), was established in 1974 to address global issues, reduce poverty through equitable growth, improve governance, and achieve human security around the world.[25] In 2008, JICA merged with the Japan Bank for International Cooperation. This merger enabled the new JICA to use the loan scheme for aid and become the second largest overseas assistance agency after the World Bank. Until then, JICA's assistance scheme was confined to technical cooperation and grant aid, which severely restricted the size and scale of the development assistance projects that Japan could undertake.

Despite the rapidly changing landscape of the global health community, Japan's government-dominated, ODA-focused development framework is still in place today. Even though the number of non-governmental organisations (NGOs) contributing to global health has increased since the 1980s, Japanese civil society remains small, fragmented, and still primarily dependent on government funding because of the historical lack of charitable contributions and lack of tax exemptions for private donations.[26] The contributions of academic institutions and independent think tanks to global health is also slight. Although there are more than 80 departments of public health in medical schools and three schools of public health in Japan, only a handful of them are actively engaged in global health research and education. As for Japan's for-profit sector, although there have been a few exceptions, Japanese companies have remained largely uninvolved in global health efforts despite being uniquely positioned to make important contributions through their comparative advantages in technology and technical expertise. Central to this ongoing lack of engagement has been a concerning unawareness of global health problems among the Japanese public, which can be explained at least in part by insufficient Japanese media coverage of global health issues.

Guiding principle of aid

Japan's foreign assistance policy is to a large extent shaped by Japan's view of assistance as part of a partnership with developing countries.[20] It follows then that Japan's assistance approach focuses on the requests of recipient countries, according to the tenet of self-help and country ownership.[27] To this end, Japan has focused its health ODA on capacity building and sustainability, which is unique among major donors.[17] With few exceptions, Japan's emphasis on self-reliance also keeps the Japanese Government from providing general, unspecified budget support to the recipient country's health sector—a practice that has become popular among European donors.[28]

The principles of demand-driven assistance, however, have not always worked out in practice as the demands of recipient governments and the actual needs of beneficiaries are not always consistent. The potential pitfalls of this approach are readily evident in Japan's health assistance to Sri Lanka between 1978 and 1988. At the request of the Sri Lankan Government rather than an objective assessment of Sri Lanka's health needs, the Japanese Government funded the construction of a large tertiary hospital. Despite accounting for more than a third of all Japanese health aid to Sri Lanka between 1978 and 1988, the 1001-bed hospital was severely underused, with only 66% of the beds being commissioned 3 years after it opened—a clear indication that the project did not adequately consider Sri Lanka's health priorities and the health sector's absorptive capacity.[29]

To be fair, the donor-driven approach of recent global health initiatives has also been the subject of some debate, most notably because global health initiatives tend to focus on their own specific targets, sometimes to the detriment of other health needs identified by the recipient country.[30] In view of this focus, Japan's willingness to consider the requests of recipient countries is potentially advantageous. However, for this development approach to be effective, objective assessments of the recipient countries' health needs are essential to guide Japan when considering ODA requests in addition to rigorous monitoring and assessment.

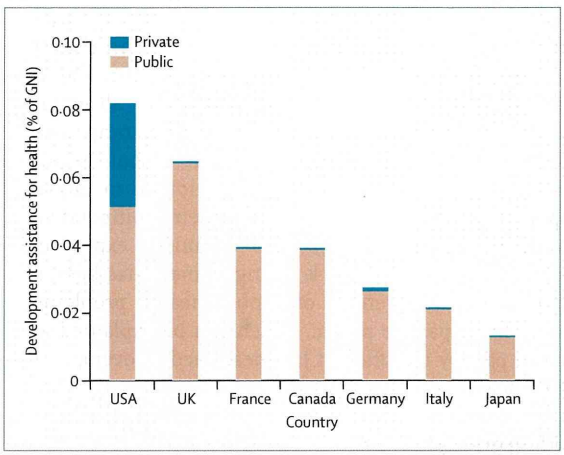

Figure 1: **Development assistance for health as a proportion of national income by channels of assistance, 2008[14,35]**
GNI=gross national income.

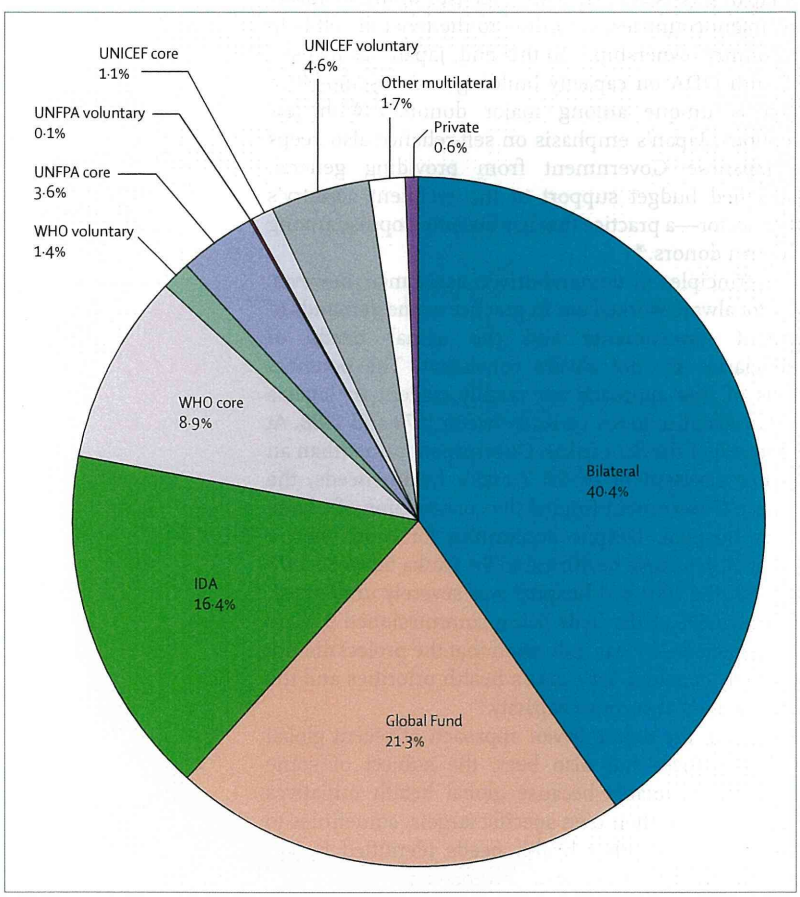

Figure 2: **Allocation of Japanese development assistance in health, 2008[14]**
Data also from Ministry of Foreign Affairs; Ministry of Health, Labour and Welfare; Ministry of Finance; and Ministry of Education, Science, and Technology; the Japan International Cooperation Agency; Japan Federation of Economic Organisations; and the MOFA-NGO Regular Meeting Network on the Global Issues Initiative on Population and AIDS and the Okinawa Infectious Diseases Initiative, 2010 (unpublished). UNFPA=United Nations Population Fund. IDA=International Development Association. Global Fund=Global Fund to Fight AIDS, Tuberculosis and Malaria.

However, so far, investigation of the effect of Japanese ODA has been limited by resistance from bureaucrats to independent assessment.[31–33] It was only in 2008 that an ODA advisory committee assessed Japan's development assistance for health for the first time. The positive side of the assistance was characterised in terms of the elaborateness of follow-up activities, consistency, and elaborateness in planning. The weaknesses included slow decision making, rigid financial scheduling, lack of flexibility at the community level, and lack of integration between bilateral and multilateral assistance.[31] These findings are limited, however, by the fact that the review was qualitative in nature and ad hoc.

Recent trends in assistance for health

Although the Ministry of Foreign Affairs sets Japanese global health policy, the lack of rigorous reporting and assessment makes it difficult to track and assess Japan's development assistance for health (DAH), which includes both public and private sources of funding. So far, there have been no comparative studies on DAH in Japan, and discrepancies exist in the DAH data available from different organisations.[34] Moreover, the classification system and definition of financial data on Japanese ODA has varied over the past 15 years. As a result, it is difficult to assess trends across Japan's three major global health initiatives (Global Issues Initiative on Population and AIDS, 1994–2000; Okinawa Infectious Diseases Initiative, 2000–05; and Health and Development Initiative, 2005–10).

Because of these limitations, we assessed trends in Japanese DAH with available data from the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee and the Institute for Health Metrics and Evaluation in addition to a newly constructed dataset for this study. Figure 1 shows DAH in 2008 in G7 countries as a percentage of the country's gross national income (GNI) in the same year, ranked from highest to lowest. In this context, Japan contributes the smallest share of DAH as a percentage of GNI (0·013%), whereas the USA contributes the largest share (0·082%), followed by the UK, France, and Canada. Japan has also been the only OECD country to sustain a decline in DAH in recent years while the US Government, civil society, philanthropic foundations, and various European countries, notably France and the UK, have substantially increased their DAH since the MDGs were declared in 2000.

Several factors contribute to Japan's disappointing performance. First, Japan's stagnating economy has inevitably led to reductions in the Japanese Government's DAH contributions, also known as health ODA. Second, Japan's health ODA is set at only 2% of its total ODA, which is substantially lower than the average for OECD countries at 15%. Further to this, Japan's non-governmental sector only accounts for less than 1% of Japan's total DAH by contrast with the USA where the

non-governmental sector contributes 37·3% of the USA's total DAH. This shows that Japan has not yet effectively mobilised the resources of its private sector in global health, which has hindered Japan's ability to achieve higher levels of DAH.

In terms of channels of assistance, figure 2 shows that Japan channels 40·4% of its DAH through bilateral mechanisms and 59·0% through multilateral mechanisms, with close to half of its DAH going to the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank International Development Association, and WHO. Meanwhile, the USA directs only 9·7% of its DAH through multilateral mechanisms, with the largest share channelled through NGOs and other private organisations. When donor contributions to WHO are disaggregated further as core or voluntary funding, it is clear that most of Japan's contribution is classified as core funding (86·8%)—an inevitable consequence of UN funding rules, which dictate core contributions on the basis of the country's GNI. Unfortunately, donors cannot determine how core funds are used, thus preventing Japan from playing a more prominent part in setting the global health agenda within WHO. By contrast, 64·2% of the UK's funding to WHO is in the form of so-called voluntary contributions, which enables the UK to actively participate in managing funding allocation.

Global health priorities

In terms of financial contributions, Japan has been largely directing its DAH toward infectious disease control including HIV/AIDS, tuberculosis, and malaria control (figure 3). It also directs its DAH toward improvements in health policy and administrative management, such as institutional capacity building as well as basic health care and medical services such as primary health-care programmes and improvements in laboratories including equipment and supplies. Meanwhile, Japan allocates a small proportion of its DAH towards health-personnel development (1·9%) and research and development (2·5%).

In terms of regional priorities, Asia has always been the largest beneficiary of Japan's foreign development assistance because of Japan's political and economic relations with other countries in the region. However, the proportion of ODA to Asia declined from 65·7% in 2000 to 20·1% in 2008, as Japan shifted its geographical focus for assistance, partly because of economic growth in Asia. Japan is now enhancing its support to Africa and the Middle East (mainly Afghanistan and Iraq), which shared the largest proportion of Japanese assistance in 2008, 44·5% and 26·2%, respectively. Central to the rationale for this shift in geographical focus has been Japan's commitment to peace-building efforts, the poor progress achieved in improving health outcomes in sub-Saharan Africa,[36] and Japan's strongly held belief that there will be "no stability or prosperity in the world unless the problems of Africa are resolved".[37] This strong commitment to Africa's development can be traced back to the 1990s when Japan launched the First Tokyo International Conference on African Development at a time when Africa was not at the forefront of the worldwide community's development efforts.[37]

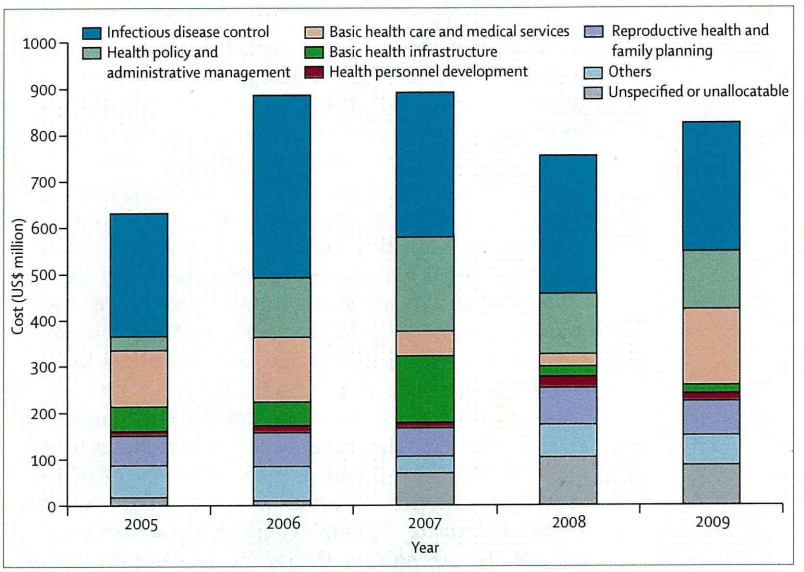

Figure 3: **Distribution of development assistance for health in Japan, 2005–09**
Data from Ministry of Foreign Affairs; Ministry of Health, Labour and Welfare; Ministry of Finance; and Ministry of Education, Science, and Technology; the Japan International Cooperation Agency; Japan Federation of Economic Organisations; and the MOFA-NGO Regular Meeting Network on the Global Issues Initiative on Population and AIDS and the Okinawa Infectious Diseases Initiative, 2010 (unpublished).

Japan's untapped potential

Thus far, this Series in *The Lancet* has showcased the wealth of knowledge and expertise on health that Japan has accumulated over 50 years in its own quest to improve the health and wellbeing of its people. As shown in the first report of this Series,[11] Japan reduced child mortality rates substantially by scaling up key child-survival interventions and developing an effective link between community-based and facility-based care for maternal, newborn, and child health during the 1960s. Japan also effectively reduced adult mortality rates through public subsidies for treating tuberculosis, provided universal access to basic medical services, and reduced inequities in co-payments across different insurance plans over time.[8]

These experiences and expertise are highly relevant in an era of scaling up interventions to achieve the health-related MDGs, and Japan's experience and knowledge of health insurance[9,10] and long-term care[8] will also be a huge asset in the post-MDG movement towards long-term care in societies where the proportion of elderly people is increasing. As a citizen of our increasingly interconnected and interdependent world, Japan should be actively sharing these accumulated insights with the international community and using them to strengthen national health around the world in pursuit of progress in global health.

To Japan's credit, the Japanese have in many instances shown substantial leadership in global health initiatives, such as in the eradication of smallpox. As the chief of the WHO Smallpox Eradication Unit between 1977 and 1985, Isao Arita was responsible for overseeing the WHO's efforts to eradicate smallpox—achieved under his leadership in 1980.[38] Similarly, Arata Kochi, a Japanese public health physician, directed the WHO's tuberculosis programmes for 10 years and was instrumental in promoting the worldwide implementation of the Directly Observed Treatment Short course strategy to treat tuberculosis in the 1990s, which the WHO Director-General declared in 1994 as the most important public health breakthrough of the decade.[39]

At the intergovernmental level, the Japanese Government has also successfully raised the issue of global health as a major agenda item in two of the recent G8 summits it hosted in Kyushu-Okinawa and Hokkaido Toyako.[40] By employing a participatory process of multiple stakeholders, the Japanese Government was able to effectively facilitate the development of strategic public–private partnerships, most notably the Global Fund.[40–44] This approach made it possible to reach high-level policy makers and bureaucrats and to put the strengthening of health systems high on the G8 agenda.[42,45]

Although these successes in global health have been under-recognised, because Japan has traditionally adopted a low profile, our analyses show that Japan has not yet achieved its full potential to affect global health. Perhaps the most visible sign of Japan's untapped potential is its low financial commitment to global health. Further to this, the absence of a long-term, evidence-based global health strategy is prominent because of a lack of rigorous assessment by health experts. Japan's contribution in terms of human resources to develop global policies is disappointing despite its breadth of expertise in domestic health issues. A recent analysis by the UN,[46] for instance, showed that UN staff of Japanese origin are under-represented. Furthermore, only one staff member with an advanced health degree is employed by the Ministry of Foreign Affairs and an estimated 29 by JICA—a clear indication that there is insufficient emphasis placed on the development and recruitment of Japanese global health experts.

Re-invigorating Japan's commitment

In view of the fast-approaching MDG deadline and the emergence of increasingly complex post-MDG health-care challenges, global health, now more than ever, should be a priority for Japan. Loudly echoing this sentiment are the Japanese people themselves. In a public opinion survey undertaken in 2010 by the Cabinet Office,[15] greater than 70·0% of the Japanese general public rated health as the most important priority for the government to invest in of all the potential priorities for which development assistance could be provided. This survey also showed that 58·0% of respondents thought that the government should increase its health ODA despite economic setbacks, whereas only 28·7% thought that it should be reduced. Clearly there is a wide gap between what Japan is currently contributing to global health and what the Japanese public thinks Japan is capable of contributing. Such overwhelming public support represents a viable window of opportunity to enact reform at a time when the world so urgently needs greater global health engagement.

Recommendations for reform

The opportunity for change

In 2009, the Ministry of Foreign Affairs announced a revised ODA policy direction, which emphasised achieving the MDGs, multistakeholder partnerships, and more effective assistance.[36] Although the proposed reforms by the Ministry of Foreign Affairs represent a step in the right direction, substantial changes to Japan's present global health framework are desperately needed. In the present period of political transition and widespread public backing, Japan has the opportunity to prepare for radical, not incremental, change.[47] We recommend bold actions to start this process of reform.

Government agencies and a global health committee

The greatest barrier to reform is Japan's antiquated but deeply entrenched institutional mechanism for global health policy making. It is characterised by fragmented relations between the different ministries and agencies tasked with global health initiatives. In the present fragmented framework, the lack of consensus and coordination between the Japanese Diet; the Ministry of Foreign Affairs; the Ministry of Health, Labour and Welfare; the Ministry of Finance; and Japan's bilateral development agency, JICA, greatly slows, if not completely stifles, progress. Against this backdrop, how can Japan transfer its accumulated domestic health knowledge into relevant global health strategies?

We recommend the creation of a global health committee in the highest level of Japan's Government, consisting of policy makers, bureaucrats, academics, and civil society representatives both from within and outside Japan. Such a process was successful in surmounting substantial fragmentation and lack of coordination at the time of the G8 Hokkaido Toyako Summit in 2008. That one-off exercise needs to be renewed and sustained institutionally. Moreover, the implementing agencies, namely JICA, the National Institute of Public Health, the National Institute of Infectious Diseases, and the National Centre for Global Health and Medicine, also need to be consolidated and equipped with stronger technical expertise and capacities.

This restructuring of the interactions of Japanese global health participants would greatly facilitate efforts to tackle one of the country's greatest obstacles: its low spending on global health. The proposed consolidation

and greater coordination would also have other benefits, including improvements in health-leadership development, more effective use of human resources, and independent and robust assessment of Japan's global health policies.

ODA commitment to health

Even at 0·013% of Japan's GNI, the absolute amount of Japan's health ODA is still substantial (US$652 million in 2008), but it is small relative to what Japan is capable of contributing. In today's resource-driven global health arena, Japan cannot be a major leader in global health with such a small budget commitment. This raises a crucial question: to what level should Japan's financial commitment be increased?

Although it is important to assess Japan's ODA performance against the internationally agreed ODA commitment level of 0·7% of GNI, this benchmark does not allow for a complete assessment of Japan's health ODA because Japan can theoretically achieve this target without substantially increasing the level of its ODA devoted to health. For this reason, we do not simply recommend that Japan increase its ODA from 0·18% (in 2009) to 0·7% of its GNI. Instead, we propose a new health-specific ODA benchmark that has not been previously defined in international agreements: health ODA as a percentage of GNI, which we set at 0·05%. We calculated this value by taking the average health ODA invested by 22 OECD Development Assistance Committee countries as a percentage of GNI.

If Japan would like a greater role in global health, it must increase its health ODA as a percentage of GNI from 0·013% to at least 0·05%. By reaching this level, the Japanese Government's health ODA would almost quadruple to $2·5 billion annually, making it the second largest health ODA donor in the world after the USA. This can be achieved simply by raising the percentage of Japanese ODA devoted to health from 2% to 7·7%, which is still substantially lower than the present OECD average of 15%.

Unfortunately, the Ministry of Foreign Affairs recently announced a total ODA budget reduction of $533 million in 2011, with a budget cut of $169·1 million to the Global Fund alone.[48] Although it is understandable that Japan has recently focused its attention on its own national relief and recovery efforts after the Great East Japan Earthquake, it is crucial that the Japanese Government expeditiously reverse this decline in ODA if it is to remain relevant in global health.

Japanese non-governmental sector initiatives

Most of Japan's development assistance for health comes from the government (figure 2), with Japanese NGOs contributing less than 1% of Japan's total DAH, most of which originates from the government. It is clear from the example of other countries such as the USA, however, that the non-governmental sector is capable of making substantial financial and technical contributions to global health. We thus recommend that Japan mobilise the untapped financial resources and technical expertise of its non-governmental sector (ie, public–private partnerships, NGOs, corporations, and foundations).

These resources clearly exist in Japan. The Japan Committee for UNICEF, for instance, is one of the largest contributors to UNICEF of national committees for UNICEF in the world, raising $219 million in 2009 from which it provided $177 million to UNICEF.[49] Big corporate entities are also becoming more active in global health, such as Sumitomo Chemical, which transferred its technology for developing its long-lasting insecticidal net to a company in Tanzania and Ethiopia, resulting in the production of 29 million long-lasting insecticidal nets annually (panel 1).[50,51] The emerging role of Japanese private investors is also noteworthy because they purchased almost half the vaccine bonds that the International Finance Facility for Immunisation issued since 2008, worth $1·5 billion.[53]

Like these, additional innovative non-governmental initiatives in global health must be encouraged and sustained. Japan-based foundations, for instance, primarily focus on promoting cultural activities and the arts but should also become more directly involved in global health development. Unfortunately, greater

Panel 1: **Sumitomo Chemical's commitment to malaria eradication**[50,51]

There are more than 200 million new cases of malaria annually, causing nearly 1 million deaths each year. The burden of disease is greatest in Africa, which accounts for greater than 90% of malaria cases worldwide. Because malaria is a major cause of poverty, effective prevention and elimination of the disease is crucial to Africa's development. Developed by Sumitomo Chemical, a private Japanese manufacturer, the Olyset anti-malarial bednet is a long-lasting insecticidal net that does not need chemical treatment and is the only long-lasting insecticidal net guaranteed to last for at least 5 years. Affordable, tear-resistant, and wash-proof, the Olyset bednets have been endorsed by WHO as an effective way of preventing contact with malaria-transmitting mosquitoes.

Aware of the dire need in Africa for effective malaria prevention strategies and the opportunity to fulfil its corporate social responsibility, in 2003, Sumitomo Chemical transferred its Olyset bednet technology free of charge to a local Tanzanian mosquito net manufacturer, allowing long-lasting insecticide bednets for the first time to be produced locally in Africa. To cope with increasing demand, Sumitomo Chemical partnered with a local African manufacturer in 2005 and created Vector Health. By 2008, Sumitomo Chemical's efforts had resulted in the production of 19 million nets annually and the creation of 4000 local jobs in the process. In 2009, the company expanded its annual production in Tanzania to 29 million nets and opened a new factory in Ethiopia with plans to set up other facilities in Malawi and Uganda.

Spurred by Sumitomo Chemical's desire to raise its social profile and "maintain the trust of society", its commitment to malaria eradication efforts in Africa have had a substantial effect on global health activities in the region.[52] Clearly an effective and viable example of how non-governmental resources can be mobilised for health development, Sumitomo's initiatives should be given greater recognition and publicity to encourage global health engagement by other Japanese for-profit businesses in fulfilment of their corporate social responsibility.

Panel 2: New civil society movements in Japan

Although Japanese civil society has always been somewhat weak and restricted in scope, new innovative Japanese non-profit consulting organisations are starting to emerge. One notable example is Soket, which seeks to implement market-driven, innovative business approaches to global development issues in China, eastern Europe, Africa, and central and south Asia. Through accumulated expertise, in-depth assessment of local needs, partnerships, and professional development, Soket helps companies establish business models in developing countries that achieve both profit and social progress.

For more on **Soket** see http://www.soket.me/index_e.html

Table for Two (TFT) is another newly emerging non-governmental organisation seeking to promote health worldwide by simultaneously addressing hunger in the developing world, and obesity and other lifestyle-related diseases in the developed world. TFT is based on the principle that one meal bought in the developed world can also buy a meal in a developing nation. Already, more than 130 Japanese corporations, academic institutions, and government offices have committed to offer healthy food options based on TFT's healthy diet criteria. Each time a healthy meal is served, the participating company donates US$0·20 to TFT, which uses the donation to provide school meals in developing countries to schools that agree to monitor and report the delivery of the meals and the health of the children to whom they are given. The success of this movement in Japan led to its introduction to the USA in 2008 and draws attention to the fact that as one of the world's healthiest populations, the Japanese deeply value health and just need greater awareness of global heath challenges and present efforts to tackle them.

For more on **Table for Two** see http://www.tablefor2.org

non-governmental sector involvement in global health is currently hindered by a concerning lack of broader engagement by Japanese society with the outside world and a lack of adequate incentives and conditions within which the non-governmental sector can flourish. Most notable has been the refusal of the Ministry of Finance to grant tax exemption status to civil society organisations, which represents one of the most concrete and effective ways by which the government can nurture the growth of the non-governmental sector.[16] Recently, there have been some encouraging developments as the Japanese Diet has passed legislation that facilitates the establishment of non-profit organisations while also increasing the maximum annual deduction level of non-profit organisations, particularly for recovery efforts undertaken in response to the Great East Japan Earthquake.[54] This new legislation will be a driving force in promoting a greater culture of donation and philanthropy in Japan, but we urge the Japanese Government to create further financial incentives for non-governmental initiatives. We also call for greater public awareness of global health issues through effective media coverage and campaigns.

For more on the **US Institute of Medicine** see http://www.iom.edu

Research capacity and global health leadership

Further hindering the effective transfer of Japanese lessons and knowledge about best practices into global health has been a lack of robust scientific assessments of national and foreign health policies. In fact, this Series in *The Lancet* is the first opportunity to discuss and assess Japan's national and international health policy in a scientific manner—an effort that must be sustained if Japan is to successfully integrate and transfer its national health expertise into the global health arena.

Sustaining this effort, however, will require that Japan substantially increase its overall research capacity in global health, both inside and outside the government. At present, there is a lack of technocrats in JICA and other involved government ministries, owing in part to a severe shortage of global health experts. Meanwhile, outside the government, there are only a handful of Japanese universities that are actively engaging in global health research and education. Notably, Japan's Ministry of Education, Culture, Sports, Science, and Technology created the present Japan Initiative for Global Research Network on Infectious Diseases to establish collaborative research centres in Asian and African countries. Nevertheless, more collaboration and engagement is needed and there is as yet no substantial involvement in research and education efforts by Japanese NGOs and corporations in science.

Enhancing Japan's research capacity while ensuring robustness and objectivity will require efforts on two fronts. First, Japan must prioritise the development of Japanese human resources in global health, both by creating global health leadership programmes within Japanese universities and by mobilising domestic health experts into the global health arena through posts within the UN, JICA, NGOs, and scientific corporations. Second, to ensure robustness and objectivity, independent assessments of health policies are crucial. These assessments would not only positively influence Japan's global health efforts but also domestic reforms in health because this has not been a strong part of Japanese policy traditions. To this end, we propose giving greater resources and voice to academics as well as the creation of an external assessment agency, such as the Institute of Medicine in the USA, an independent non-governmental organisation that provides unbiased and authoritative advice to the US Government and private sector on matters related to health and health care.[55]

Looking ahead

Japan's contribution in Asia

As the global health community embarks on the path toward universal health coverage, few world regions are in as much need of assistance as Asia—a region that Japan is uniquely positioned to aid in view of its many shared historical, geopolitical, and economic experiences.[3] In some notable instances, middle-income countries

have made substantial progress toward universal insurance coverage—such as Thailand, which has covered 97·7% of the population (as of 2007) since its start in 2001.[2] However, by contrast, other countries' rates of health insurance coverage are poor, with rates as low as 5·7% in India, 0·4% in Bangladesh, and 0·1% in Nepal.[56] As these Asian countries work to find sustainable health financing mechanisms and insurance coverage schemes, Japan should take a leadership role in policy guidance and development by drawing on its own knowledge and expertise in improving health when Japan was a middle-income country in the 1960s.

Japan should also use its leadership role in various regional forums to promote global health goals in Asia. For instance, Japan has been actively engaged in regional forums on economic cooperation and other global issues, such as the Asia-Pacific Economic Cooperation where health became a priority topic this year.[57] It also functions as a permanent organ under the Asia–Europe Meeting, where it leads the Asia–Europe Meeting initiative on pandemic influenza as one of its major donors.[58] Both of these forums represent viable means by which Japan can make health an even greater regional priority. Moreover, as China and South Korea become major donor countries in the region, Japan should actively work in partnership with them in pursuit of better regional health outcomes. Already, four Tripartite Health Ministers Meetings between Japan, China, and South Korea have been convened since 2007, to promote consorted efforts on sharing regional knowledge and collaborative assistance activities in the region. So far, the Tripartite Health Ministers Meetings' agenda has been confined to sharing regional knowledge on pandemic influenza and the MDGs, but the scope should be expanded in the coming years to include other areas relevant to global health.

Japanese vision for the future of global health

With improvements in the policy-making process, increased financial commitments, non-governmental sector innovation, and global health leadership, Japan is poised to transform the way it deals with the health of people in Japan and around the world. In an era of unprecedented worldwide interdependence and health challenges, we submit that Japan cannot afford to wait any longer to take action. In fact, never has there been a time in Japan when understanding the need for worldwide solidarity has been so important as Japan now faces a devastating complex emergency caused by the Great East Japan Earthquake and tsunami of March 11, 2011, and the ensuing nuclear crisis.

Already, there are promising signs of change. In response to the present Japanese crisis, we have seen an outpouring of passionate Japanese youth committed to helping those severely affected by the disasters. By use of innovative social media, they have effectively gathered and diffused information, garnered support for projects, and launched massive donation campaigns. Like these, there are a growing number of innovative global health initiatives emerging in Japan, which we believe will further facilitate the development of people-centred health systems and governance (panel 2).

However, Japan alone does not have all the answers and solutions for global health. Like Japan, many other nations have amassed countless insights and knowledge from health innovations over the years in pursuit of their own national health, which have yet to be globally pooled, systematically assessed, and integrated into global health efforts. This is unacceptable. Collectively, this wealth of knowledge represents an almost boundless, but as yet untapped, source of potential lessons for a world that urgently needs them. The time to act is now.

Contributors

RL, SK, LC, and KS set the conceptual framework of the report. RL, SK, and RM searched published work. SK and HS compiled data and contributed to the data analysis. RL, RM, OK, and KS contributed to the writing of the report. LC, OK, TT, YN, KK, YH, and KT contributed to the critical revision. All authors contributed to the discussion and have seen and approved the final version of the report.

Conflicts of interest

We declare that we have no conflicts of interest.

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Japan: Universal Health Care at 50 Years 6

Future of Japan's system of good health at low cost with equity: beyond universal coverage

Kenji Shibuya, Hideki Hashimoto, Naoki Ikegami, Akihiro Nishi, Tetsuya Tanimoto, Hiroaki Miyata, Keizo Takemi, Michael R Reich

Japan's premier health accomplishment in the past 50 years has been the achievement of good population health at low cost and increased equity between different population groups. The development of Japan's policies for universal coverage are similar to the policy debates that many countries are having in their own contexts. The financial sustainability of Japan's universal coverage is under threat from demographic, economic, and political factors. Furthermore, a series of crises—both natural and nuclear—after the magnitude 9·0 Great East Japan Earthquake on March 11, 2011, has shaken up the entire Japanese social system that was developed and built after World War 2, and shown existing structural problems in the Japanese health system. Here, we propose four major reforms to assure the sustainability and equity of Japan's health accomplishments in the past 50 years—implement a human-security value-based reform; redefine the role of the central and local governments; improve the quality of health care; and commit to global health. Now is the time for rebirth of Japan and its health system.

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This is the sixth in a Series of six papers about Japan's universal health care at 50 years

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Introduction

The global health community is quickening its efforts aimed at ensuring health coverage for all.[1–3] The 58th session of the World Health Assembly in 2005 endorsed a resolution, urging its member countries to work towards sustainable health financing, defining universal health coverage as access for all to appropriate health services at an affordable cost. The World Health Assembly also urged countries to strive for the achievement of universal coverage by using, in accord with their specific contexts, a mix of prepayment systems that include tax-based financing and social health insurance.[4] In the past decade, low-income countries such as Ghana and Rwanda have introduced national health insurance schemes designed to achieve universal coverage at an affordable cost.[5–7]

The definition of universal coverage is still debated, but generally it is access to key promotive, preventive, curative, and rehabilitative health interventions for all at an affordable cost. The principle of financial risk protection ensures that the cost of care does not put people at risk of financial catastrophe.[4,8,9] The social health insurance approach allows the gradual expansion of the population covered and solidarity among the individuals enrolled in each plan.[9] Japan achieved universal health insurance coverage in 1961 when virtually the entire population became covered by plans for social health insurance.[10]

Achievement of universal coverage is, however, not an end, but the beginning of new challenges. Universal

Search strategy and selection criteria

We searched PubMed, Medline, Embase, Jamas, and Jstor databases, government reports, and unpublished literature from domestic sources. Once a source was identified, it was used to generate additional material (eg, by searching the reference lists of reports obtained while using this search strategy). The first section of this work is based on the earlier reports in this *Lancet* Series in which health and its associated factors are assessed in Japan 50 years after the introduction of universal health care coverage in the country. To discuss the effects of the Great East Japan Earthquake and the accident at the Fukushima nuclear power plant that followed, we used reports identified and retrieved using the above-mentioned method and documents issued by the International Atomic Energy Agency, Japanese Government, and other sources including those produced by the domestic media.

Key messages

- Although Japan achieved universal coverage in 1961 and other health-care policies and programmes have led to excellent population health at low cost with equity, the nation now has many challenges.
- Three common challenges to the health system of Japan—economic sustainability, political governance, and responsiveness to patients—were identified in the other reports in this *Lancet* Series.
- The Great East Japan Earthquake in March, 2011, showed the underlying structural problems in the health system but made the three challenges much more difficult to resolve fiscally.
- To address these challenges, we propose four major reforms for Japan's health-care system: implement human-security value-based reform; redefine the role of the central and local governments; improve the quality of health care; and commit to global health.
- There are promising signs that Japan will be able to achieve both structural health reform and disaster reconstruction. This domestic experience could be the basis for Japan to take an increased proactive role in promoting global health.

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coverage has never been static in Japan and has been developing since 1961, including changes in copayments, how financing is subsidised with taxes, and cross-subsidies for different plans.[10] This gradual change in Japan's policies for universal coverage shows policy debates that are underway in many countries in their own contexts. The financial sustainability of Japan's universal coverage is under threat from demographic, economic, and political factors.

However, the situation of low economic growth rate and unstable political climate creates a particularly difficult situation for addressing the problems of universal coverage and undertaking structural reform. Furthermore, a series of crises—both natural and nuclear—after the magnitude 9·0 Great East Japan Earthquake on March 11, 2011, has shaken up the entire Japanese social system that was developed and built after World War 2 (panel 1).[11] The disasters have clearly shown underlying structural problems in the Japanese health system that have existed for a long time.

Panel 1: The Great East Japan Earthquake

On March 11, 2011, a magnitude 9·0 earthquake and tsunami occurred at about 130 km off the northeast coast of Japan's main island of Honshu, setting off a cascade of crises that included a major nuclear power plant disaster.[12] The combined earthquake–tsunami disasters killed more than 15 500 people, with about 7000 still missing in early July, injured more than 5300, and also severely damaged more than 217 000 houses.[13] The earthquake–tsunami–nuclear power plant disasters created more than 100 000 evacuees.[11,13] Drowning from the tsunami was the primary cause of death in more than 90% of cases.[13] The triple disasters resulted in Japan's greatest humanitarian crisis since the end of World War 2.[11,14,15] In the acute phase of the disasters, emergency care was provided by many Japanese-based health institution teams, Japan's Self-Defence Force, and a few international medical teams; these efforts contributed to saving lives and treating diseases in the affected areas. Assessments are now being done on ways that emergency relief could have been improved in the acute phase.

Japan's triple disasters have now entered the chronic phase of relief, raising many difficult health questions about the processes of reconstruction. First, the management of chronic illnesses (eg, hypertension and diabetes) remains a critical health priority for both evacuees and non-evacuees. These problems have been aggravated by the lack of exercise and high salt intake among evacuees in shelters. Second, mental health problems (including post-traumatic stress disorder and hyperventilation) have emerged widely among the people affected, their family members, and the health and aid workers.[16] These problems are related to the massive devastation and losses at the individual and social levels, and the high levels of uncertainty about the future, including radiation-related health risks, financial compensation, and community reconstruction. Third, the local economy has been destroyed throughout the region; many companies face disaster-related bankruptcy; power shortages have undermined production; and tax increases are likely to be introduced to fund the huge construction needed. Thus, the disasters have had many effects on people not directly affected. Last, the chronic phase includes the monitoring of radiation exposure and potential health effects at the population level, for workers at the power plant, nearby residents still in their houses, and evacuees in the radiation-contaminated zones. Public concern remains very high about radiation exposure from the catastrophes at the Fukushima power plant and the inability of the government and Tokyo Electric Power Company to control the nuclear disaster and provide credible public information about what is happening.

In Japanese, the term crisis literally consists of two Chinese characters—risks and opportunities. We started *The Lancet* Series about Japan[17] with the belief that Japan's current political, economic, and social circumstances offer opportunities for bipartisan reform of the health-care system after five decades of universal coverage, and the hope that Japan's definition of human security can provide the key values for dealing with both domestic and global conundrums in health policy.[10,18,19] The reports in this Series provide a comprehensive analysis of the major topics of health in Japan—population health, universal coverage, costs and service quality, ageing and long-term care, and global health.[10,17–20] Here, we summarise the main achievements of Japan's health system, discuss the challenges it confronts for the future, and present our recommendations for reform.

Good health at low cost with equity

Japan's premier health accomplishment in the past 50 years is the achievement of good population health at low cost with increased equity between different population groups. A landmark study[8] of health systems (in China, Costa Rica, Sri Lanka, and the Indian state of Kerala) reported in 1985 is now being revisited by an alliance of international researchers.[21] We believe that Japan's experiences, especially how the country successfully pursued egalitarian principles while seeking good health at low cost, provide several important lessons for the achievement of good population health.

Japan's achievement of universal health insurance coverage in 1961 was fairly early in the world, especially with an income per person that was half that per person in the UK.[10] Today virtually all Japanese people are covered by social health insurance, through 3500 plans according to where they are employed or where they reside. Japan has also reduced inequities between the different insurance plans by making co-payment rates uniform, except for elderly people and children, and by mandating cross-subsidies among plans to adjust for the different proportions of elderly people enrolled. These efforts have worked towards implementation of egalitarian principles of equal treatment in terms of social health insurance for nearly all Japanese citizens. However, inequities exist in the proportion of income contributed as premium and part-time workers are increasingly not insured.[10,22]

A concern about universal coverage is how to control health expenditures in a sustainable manner.[23] Japan's basic policy has been a combination of tight supply-side control for the conditions of payment with the fee schedule, with a laissez-faire approach to how services are delivered.[17] Although the structural and process dimensions of quality, especially in chronic disorders such as hypertension, seem to be poor, quality is primarily a result of how physicians and hospitals have developed, and the inadequate governance of professional organisations, and not attributable to the cost containment

policy. Outcomes of subspecialty acute care services such as postsurgical mortality rates are as good as those reported in other countries. However, the needs and supply of health-care resources are mismatched, and accountability is lacking for the quality of care.

Japan has also developed innovative policies to address the country's rapidly ageing population. The proportion of people aged 65 years and over has nearly doubled in the past two decades, going from 12% in 1990 to 23% in 2010. Since the late 1970s, policy makers in Japan have focused on how to finance health expenditures for elderly people. As discussed in the report about ageing in this Series,[20] Japan implemented a public long-term care insurance in 2000 to meet the challenges of its ageing society and to contain health expenditures. Long-term care insurance operates on the basis of social insurance principles, with benefits provided irrespective of income or family situation; it is unusually generous in terms of both coverage and benefit. This policy has gained widespread public acceptance, shown in the doubling of service use and expenditures in the past 10 years, during which health expenditures increased by only 15%. Although the policy's effects on beneficiaries and carers still need a complete assessment, the long-term care insurance policy has been successful in enhancing women's participation in the labour market and reducing the fiscal burden on households. However, issues of financial sustainability, overdependence on institutional care, and inadequate attention to the needs of informal carers remain to be solved.[20]

Japan's health achievements for the population are impressive. Life expectancy at birth for women is 86 years and has ranked first in the world since 1986. The achievement in reduction of mortality rates can be considered in two periods, as discussed in the report about population health in this Series.[19] The first period was right after World War 2 until the mid-1960s when reductions were noted in mortality rates in children younger than 5 years with infectious diseases and in adults with tuberculosis. The second period was from the 1960s until now (after achievement of universal coverage), when reductions in rates were mainly noted for adults and elderly people with cerebrovascular and ischaemic heart diseases.

Reductions in mortality rates were partly attributable to public health measures for infectious diseases and the provision of free treatment for tuberculosis in the first period even when the country was poor, and to management of health risks through salt reduction and the use of antihypertensive drugs in the second period. The health-care system made a synergistic contribution by assuring access to health care for all citizens, and by regulating prices so that out-of-pocket payments by patients were low. Japan's experience of good health at low cost suggests that a country's priority in health policy should initially be on improving access and preventing impoverishment from health care, and then efficiency and quality of services should be pursued.[17] Even in the 1950s, mortality from causes other than infectious diseases and cerebrovascular diseases was already low, suggesting that the Japanese have a genetic or lifestyle-related propensity to longevity.

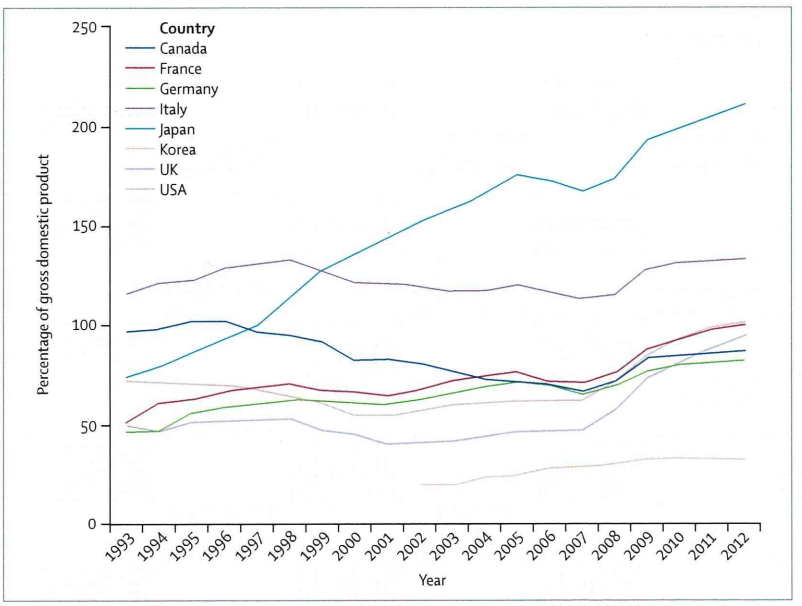

Figure 1: **Government debts as proportion of gross domestic product**
Data from the Organisation for Economic Co-operation and Development.[27]

In the past two decades, life expectancies have continued to improve despite adverse economic circumstances, increases in copayment rates for many people since 1983, and increases in income disparity and unemployment rates since the 1990s. However, doubts exist about whether Japan has really achieved a healthy society. Available data show that the improvement in healthy life expectancy decelerated since the 1990s.[24] Additionally, although Japan's socioeconomic disparities in various health outcomes are still small compared with other countries, mortality rate is increasingly determined by the socioeconomic status and suicide rates are increasing among male workers.[19] These health problems might be indicative of broader systemic challenges that require solutions, especially in the context of Japan's persistent economic stagnation and increasing government debt besides its rapidly ageing population.[25] Can Japan manage to pursue the health of the population and the health of each individual at a low cost?

Japan's future challenges

The three major challenges to the Japanese system for good health at low cost with equity have been identified as economic sustainability, political governance, and consumer responsiveness in this Series.[10,17–20]

First, the most daunting challenge for Japan is the national fiscal situation and the way health care is financed. Although the bulk of health expenditures is

Panel 2: Drug and device lags

In Japan, there are substantial delays in the approval and introduction of new health technologies, including drugs, devices, and vaccines. New drugs took about 3·7 years after first world application before market launch in Japan during 1999–2003.[33] This long period compared with delays in other developed countries is attributable to the longer processes required for undertaking clinical trials, delay in filing new drug applications in Japan, longer approval process by Japan's regulatory authority, and tight price regulation that dampens incentives for pharmaceutical companies to enter the market.[34,35]

The delay is even longer for new devices in Japan. For example, Japan's approved implantable artificial heart has been replaced with newer second-generation devices in other countries. As a result, the device used in Japan has disappeared from the global market, and the latest devices are not available to Japanese patients with end-stage heart failure.[36]

Similar delays have been noted for vaccines. In Japan, vaccines for *Haemophilus influenzae* type b, *Streptococcus pneumoniae*, and human papillomavirus were recently approved after years of delay compared with other countries. Furthermore, Japan has continued to use a live, attenuated oral poliovirus vaccine, even though the government reported that 80 patients developed vaccine-associated paralytic poliomyelitis during 1989–2008 from the live vaccine.[37] Japanese domestic companies are trying to develop combined vaccines including inactivated poliovirus under the guidance of the Ministry of Health, Labour and Welfare.[38,39]

Delays in approval of drugs and devices are not only the consequences of cost containment policy,[35] but result from structural problems. Some of these problems in delayed approval could be addressed through a modernisation of the regulatory system, a fair pricing system, a formal cost-effectiveness evaluation system for approval decisions, and improved clinical research capacity by government and academic hospitals.

financed by social insurance premiums, a quarter comes from the central government's general revenues and constitutes 10% of its budget.[26] Since this amount would increase as health expenditures increase over time with the ageing society and advances in medical technology, the government must control total health expenditures so as to contain the overall budget. Budget constraints have been severe ever since Japan's economic bubble burst in 1991. Since then, the country's national debt has accumulated to twice the gross domestic product.[27] Thus, on the one hand, health-care costs will become increasingly difficult to contain, and on the other hand the government does not have the capacity to increase funding. Worse, the emergent budget for reconstruction and compensation of the triple-disaster-hit areas will further increase fiscal pressure on government (figure 1).

Second, Japan is "a despondent country with a dysfunctional political system", according to *The Economist*.[28] The chaotic national management of the recent nuclear power plant crisis shows the need for stronger political leadership and greater transparency in decision making. After the disasters occurred on March 11, 2011, the government created many official task forces that contributed to inefficiencies in the government response. The untimely and contradictory disclosure to the public of information about the risks of radiation and the extent of damage at the power plant helped create public confusion and mass panic, and contributed to raising distrust in the government.[29] Academics who sat on government committees were also criticised for their ineffectiveness, inappropriate risk assessments, and unclear messages to the public as a result of poor communication skills and conflicts of interest between the government and the nuclear power industry. The official response to the disasters showed Japan's antiquated institutional mechanism for policy making, which is characterised by fragmented relations and competition among the different ministries and agencies, and close ties among industries, academics, and governmental bureaucrats within a specific area as exemplified by the nuclear energy policy. The confused official response has been worsened by mutual mistrust between bureaucrats and politicians in the government led by the Democratic Party of Japan. The disaster also showed the legacy of ineffective regulation of the nuclear power industry from decades of government by the Liberal Democratic Party.[30]

Last, Japan's health system is not responding to people's changing expectations about health and increasing demands for good-quality services, particularly in an interconnected world. This trend has raised national debates about several medical issues. For example, reports about the health hazards of drugs, followed by a series of lawsuits, brought modernisation of the drug and device regulatory system.[31,32] However, the delayed approval of new drugs, devices, and vaccines frustrates doctors and patients (panel 2). These trends indicate increasing tensions and conflicts among medical workers, patients, and the mass media in Japan's health system.

The Japanese Government in 2009 recognised the strategic importance of the specialty of life innovation that seeks to bring together economic growth, science and technology, and quality of life in an ageing society.[40] That policy, approved in 2009 by the cabinet, promotes scientific research in life sciences, informatics, and genomics in pursuit of innovations that will improve diagnosis and treatment of disorders that affect ageing societies.[41] We welcome this technology-driven and growth-oriented approach to consider health as a prominent economic sector.[42,43]

Despite a continuous increase in the number of physicians, there is a shortage of physicians in some specialties, especially obstetrics, paediatrics, and surgery.[44,45] Shortages in some specialties are further compounded by changes in patients' views about the quality of service and non-medical aspects of care (eg, respect for individuals and client orientation).[46] Patients have become increasingly sophisticated in their understanding about quality and physicians,[47] whereas physicians have not been able to keep pace with these changes. Even for low-risk operations, many patients now seek care from specialists in tertiary hospitals. In terms of emergency care provision, Japanese society, including parents, general internists, and

emergency care physicians, seems to insist on children being seen by a paediatrician and not by an internist on duty.[48] These expectations, with the poor differentiation in service provision and misdistribution between specialties, have created bottlenecks in major medical centres, especially for emergency care. Because patients' expectations have changed, the roles of primary care physicians and specialists and the balance between them need to be adjusted.

Although Japan's current system might be making people healthier, it does not seem to be able to meet rising expectations. In this context, Japan needs to reconsider the meaning of health in an ageing, uncertain, and global context. In particular, Japan needs to give greater attention to people's values about health and to develop a coherent vision as a leader in global health. To address these challenges, we believe that Japan must undertake a major restructuring of its health system.

Reforms for the future

A broad consensus exists in Japan today about the need for reforms in health (as in many other areas of national policy), but little agreement on what to do or how to do it. Japan seems to have lost its capacity to make tough social decisions that impose costs on some stakeholders. We propose four major reforms to assure the sustainability and equity of Japan's health accomplishments in the past 50 years (panel 3).

First, implement a human-security value-based reform. Japan's health system continues to increase the national medical expenditures. Undoubtedly, Japan needs more funding for health, through increases in insurance premiums and taxation. However, the real concern is how Japan will ensure fairness in financial contributions while securing new sources of funding for health. This ability to ensure fairness, in turn, depends on informed judgments by the Japanese people.[21]

Structural reform inevitably represents the values that a nation intends to achieve. European countries established their health systems based on their particular values and their own political and historical contexts. In Japan, as in other non-western countries, government officials and politicians imported a health system and adapted it to their own context, but the process of adoption was eclectic and not necessarily internally consistent, thereby lacking a structural mechanism to retain and improve its quality.

As discussed in the report about global health,[18] Japan made human security the cornerstone of its foreign policy because it understood the interdependence of political, economic, and social development. The Japanese health system that had worked in the past has begun to fail, and is now threatening human security within Japan, as exemplified by the recent disaster. Human security—to protect all human lives from critical and pervasive threats and give people the building blocks of survival, livelihood, and dignity[49]—such as universal insurance coverage, is more relevant than ever to meet the challenges facing Japan. Towards this end, we believe that Japan needs to apply this idea more proactively to its domestic policy. Health, as a common goal at the basis of our shared humanity, is uniquely positioned to play a major part in Japan's pursuit of human security for its own people.

Japan needs to begin reform by clearly stating the shared values that need to be achieved through the health-care system, and adhere consistently to them. We believe that equity in human security should be the core value of Japanese health policy, but it will require new commitments from every stakeholder. The basic structure of compulsory enrolment in social health insurance plans should remain, though structural reform through consolidating plans and setting fair premiums is a necessary step to improve equity.

As the era of Japan's post-war decision-making system comes to an end, a more transparent process needs to be implemented to better represent people's values. A 2010 opinion poll suggests that the major sources of the dissatisfaction with the Japanese health system are not

Panel 3: Summary of key policy recommendations

1 Implement a human-security value-based reform
- Apply the notion of human security with increased proactiveness to Japan's domestic policies
- Refine governmental health policies in medical education, system monitoring, and assessment from the people-centred perspective
- Maintain the basic structure of compulsory enrolment in the social health insurance plan, based on the underlying value attached to equity in Japanese society
- Use good-quality research and scientific evidence to frame key choices in local, national, and global decision making

2 Redefine the role of central and local governments
- Transfer the authority and responsibility for improving the efficiency of allocation of health-care resources and sustainability of funding to prefectural governments
- Consolidate fragmented agencies and institutions (eg, Japanese version of the Institute of Medicine, Centers for Disease Control and Prevention, and National Institutes of Health)
- Reconstruct health systems in Tohoku area damaged by the Great East Japan Earthquake as the test case for future reforms based on human security

3 Improve the quality of health care
- Build clinical databases to certify subspecialties to improve quality of physicians
- Establish general practice as an official subspecialty for patient-centred seamless care
- Monitor performances with mandatory reports for benchmarking
- Enable functional differentiation and the establishment of referral networks in clinics and hospitals

4 Commit to global health
- Provide opportunities for domestic and global health experts to interact
- Mobilise Japan's accumulated knowledge, especially of the universal coverage, ageing and long-term care, and health and wellbeing for the past 50 years in the global health context