



The Challenge of Reforming Japan's Health System

| November 2008



Multiple problems are threatening the sustainability of Japan's health system. For example, some patients do not receive the most appropriate treatment because the system lacks control over the supply of and demand for health services. The quality of care delivered varies throughout the country, and costs are not always effectively controlled. Although Japan has realized that its health system has problems, the steps it has taken to correct them have not always achieved the desired impact. Three interrelated factors are impeding the country's ability to reform its health system: the system's shortcomings are often misdiagnosed, many of the proposed solutions fail to address root causes, and political considerations make reform difficult. If Japan wants to develop a truly effective reform program, it must begin by reaching consensus on the root causes of the system's most pressing problems and developing a plan for overcoming the obstacles that have prevented reform until now. It must then establish a vision for its future health system, identify potential reforms that will change the current system in the right way, and develop a long-term implementation plan.

Preface

This report is one of the end products of a project by the Japan office of McKinsey & Company, working in collaboration with the McKinsey Global Institute (MGI) and colleagues in McKinsey's Global Health Systems practice. This research builds on our significant experience working with many institutions involved in the Japanese health system, as well as earlier work by MGI and the Health Systems practice on the performance of health systems around the world.

Our aim is to provide a sound and unbiased fact base for use in the public debate on health care and to enable policymakers, regulators, intermediaries, payors, providers, employers, clinicians, and patients to make more informed and therefore better decisions.

Ludwig Kanzler, an associate principal in McKinsey's Tokyo office, led this effort, supported by a team composed of Martha Laboissiere, a senior fellow, and Sara Parker, a research analyst, both of whom worked with MGI in San Francisco; David Urbach, an associate from the Zurich office; and Yukako Yokoyama, an engagement manager, Nana Oguro, Hiro Otake, and Naoto Yabe, associates, and Takuro Endo, Ryo Kawabata, Miki Sogi, and Masato Ushio, business analysts, all based in Tokyo.

We have benefited enormously from the extensive input received from McKinsey's global network of experts. We would like to acknowledge Hajime Kobayashi, Bob Kocher, Keith Lostaglio, Paul Mango, Shinsuke Muto, Hiro Okayasu, Brian Salsberg, Akira Sugahara, Sakae Suzuki, Yuri Tahara, Takashi Takenoshita, Keiko Tone, and Yujiro Tsutsumi.

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Our greatest thanks go to the many experts and stakeholders outside McKinsey who have met with us as part of this effort and who have provided us with invaluable input.

This work draws on McKinsey's in-depth analytical work and understanding of health systems. As always, the findings and conclusions draw on the unique perspectives that our colleagues are able to bring to bear through their intensive client work with the world's leading companies. Extensive interviews with leading academics, executives, and government officials in Japan provided additional input. As with all MGI research, this report is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

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Japan's health system is often cited as one of the best in the world. In principle, the Japanese enjoy universal access to high-quality, low-cost care, and the country scores well in terms of life expectancy, infant mortality, and other public-health measures.

Closer examination reveals, however, that Japan's health system faces multiple challenges. Some patients—especially those requiring emergency care—are having difficulty getting access to medically necessary treatments. The quality of care delivered varies throughout the system. Costs are not always effectively controlled. Furthermore, a number of current trends, including an aging population, the increased prevalence of chronic diseases, and ever-rising health care costs, are putting pressure on the health system and exacerbating its problems.

Reforms are necessary if Japan's health system is to remain sustainable, but few substantive attempts at reform have been undertaken. McKinsey & Company therefore conducted a careful examination of the system to pinpoint its most pressing problems and the most important areas for reform. We did so by analyzing what the system is doing well, what it is doing less well, how it compares with the health systems of other developed countries, and what it might learn from the reform efforts of other countries.

Our research led us to realize that three interrelated factors are impeding Japan's ability to reform its health system. First, the system's shortcomings are often misdiagnosed. Numerous press reports, for example, have suggested that patients are being denied treatment because the country faces a severe physician shortage. More careful analysis reveals that overutilization is a far greater problem than the physician shortage is.

Second, many of the proposed solutions for the system's problems fail to address root causes. For example, the system's reimbursement formulas encourage, rather than discourage, frequent physician consultations and prolonged hospital stays. Cutting fees does nothing to address this problem and may inadvertently exacerbate it.

Third, political considerations make reform difficult. Central control over the health system is limited. Many parts of the system, including physician accreditation, are only lightly regulated. Japan has few mechanisms for forcing providers to improve the quality or cost-effectiveness of care. To date, the country has been unable to address these problems in an adequate way.

If Japan wants to reform its health system so that it can cope with the challenges of today and tomorrow, it will have to overcome these impediments and tackle multiple issues simultaneously. For example, the country could minimize overutilization by tightening control over both the supply of and demand for medical care. Tighter control over supply could also help align the system's incentives so that fewer unnecessary services are provided and help ensure that treatment is available to those who truly need it. By decreasing the system's fragmentation, Japan could improve the quality of care delivered.

In this paper, we detail our research findings; in addition, we describe the factors that Japan will have to consider and the steps it will have to take if it wants to reform its health system. In two previous papers, we focused specifically on how Japan's health system should be funded, and thus that topic will not be considered here.¹

JAPAN'S HEALTH SYSTEM TODAY

As Japan's health system has evolved, particularly in the past few decades, it has generally adhered to three guiding principles: each person should have easy access to any type of medical provider, the care delivered should be the best available, and the costs to patients should be low. Japanese residents are covered by universal health insurance that covers most medical expenses.

Reimbursement rates are heavily regulated; otherwise, government intervention in the system is minimal. The country does not use any kind of gatekeeper

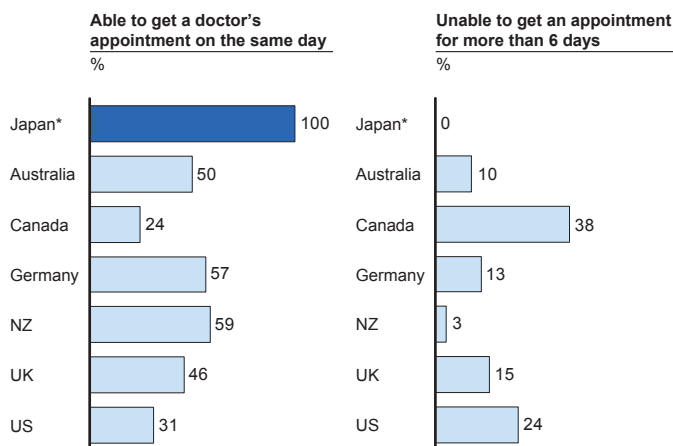
1 The challenge of funding Japan's future health care needs," McKinsey Global Institute, March 2008, and "Addressing Japan's health care cost challenge," The McKinsey Quarterly, May 2008

system;² patients are free to consult any provider (primary care or specialist) at any time, and no proof of medical necessity is required. Consultations can usually be obtained on the same day they are requested (Exhibit 1). Physicians are allowed to practice wherever they choose, and in most cases they are reimbursed on a fee-for-service basis (albeit at the payment rates set by the government) to ensure that physicians have no reason to deny patients care.³ Hospitals are expected to treat all patients who present for care unless they have severe capacity constraints.

Exhibit 1

JAPANESE PATIENTS CAN SEE THEIR DOCTOR QUICKLY

2005



* Data of Japan is from expert insights and MHLW data.
Source: Commonwealth Fund International Health Policy Survey; McKinsey analysis; MHLW

The system's performance

In many ways, Japan's health system appears to be a tremendous success. The country has the longest life expectancy and one of the lowest infant mortality rates in the world. The Japanese are markedly less likely to die of heart disease

- 2 A gatekeeper system puts limits on patients' access to specialist and hospital care; for example, it may require that patients have a referral from a primary care physician before they can seek more advanced treatment.
- 3 Japan recently introduced a new reimbursement formula for in-patients, the DPC (diagnosis procedure combination) system, at some hospitals. Under this system, the hospitals are reimbursed in two ways: a flat amount based on the patient's diagnosis and a variable amount based on length of stay.

or cancer than are the citizens of other countries; in fact, they lose significantly fewer potential life years⁴ to disease than do citizens of almost any other country. And yet Japan's spending on health care—about 8 percent of its GDP—is significantly lower than that of other developed countries. (Health care spending in France and Germany, for example, has reached roughly 11 percent of GDP.)

Deeper analysis reveals, however, that Japan's health system can claim only partial credit for the health of the Japanese population. For example, the traditional Japanese diet is a very healthy one, a fact that undoubtedly has contributed to the comparatively low prevalence of heart disease among the Japanese. Furthermore, many Japanese exercise regularly, and the frequent health checks mandated by the country's labor regulations (but not paid for by the health system) lead to early detection of many serious conditions.

Strains on the system

Several trends are straining Japan's health system, putting its sustainability in jeopardy. Today, for example, 21 percent of Japanese citizens are age 65 or older; by 2050, almost 40 percent of Japanese society may be in that age group. The aging of the population has already had a significant impact on the disease mix Japan's health system must treat. Cancer has become the leading cause of death in Japan, followed by heart disease and stroke (Exhibit 2). Furthermore, the number of people affected by Alzheimer's disease, osteoarthritis, and many of the other chronic diseases that afflict the elderly is rising.

Behavioral changes are also taking a toll. As the Japanese have adopted a more Western diet, for example, the prevalence of obesity and diabetes has increased.

Another important change in the health care environment is economic. For the past two decades, the Japanese economy has been stagnating, whereas health care spending has continued to rise (Exhibit 3). In the future, the growth in health care spending is likely to accelerate, and not only because of the trends just outlined. As medicine advances, new treatments become available, but their cost is often high. Patients will want to have access to these treatments, and physicians will want to offer them. Thus, it is crucial that Japan find a way to make its health system as cost-effective as possible so that spending can be controlled.

⁴ Potential life years lost is an indicator of premature mortality. It represents the total number of years not lived by a person who died before age 75.

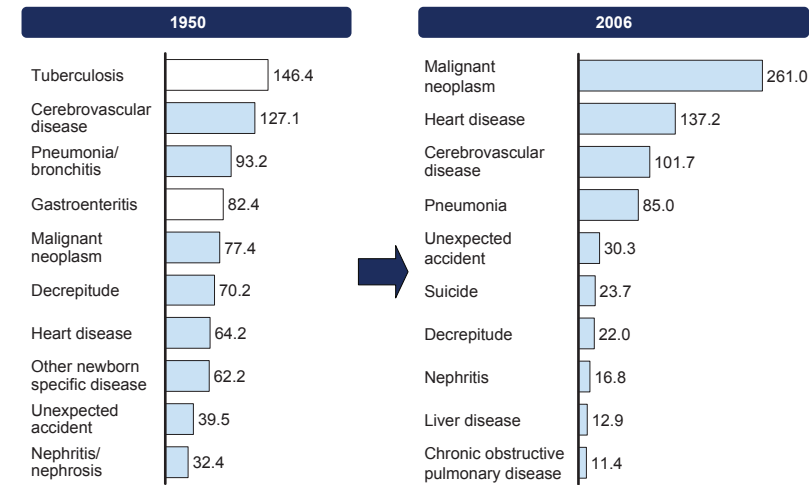
Current concerns about the system

Japan is aware that its health system needs reform; indeed, press reports about the system's shortcomings appear regularly. Our analyses show that the shortcomings can be grouped into three categories: capacity, quality, and cost.

Exhibit 2

DISEASE MIX IN JAPAN HAS CHANGED COMPLETELY IN THE LAST HALF-CENTURY

Top ten causes of death per 100,000 population

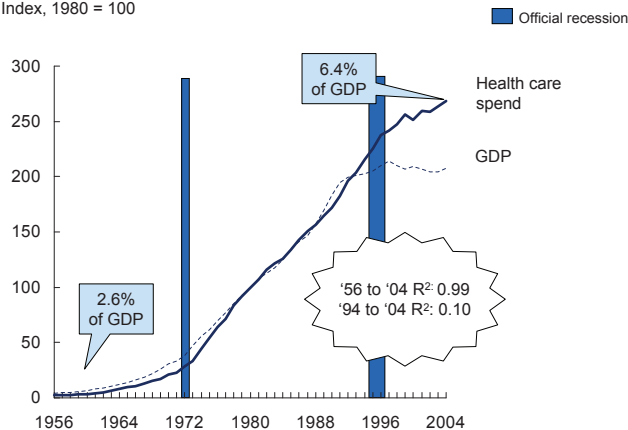


Source: MHLW Vital statistics (2007), McKinsey analysis

Exhibit 3

STAGNATING ECONOMIC GROWTH HAS PUT THE SUSTAINABILITY OF HEALTH CARE SPENDING GROWTH IN QUESTION

Medical expenditures and economic growth, nominal
Index, 1980 = 100



Source: Global Insight, MHLW, McKinsey analysis

We address each of these categories below by describing the claims that have been made and whether our analyses confirmed or refuted them.

CAPACITY ISSUES

Given the number of press reports in Japan about patients being denied treatment, we sought to determine which factors were most strongly influencing access to care. Our analyses confirmed that some patients are indeed finding it difficult to get medically appropriate treatment, but the physician shortage is only one of several root causes.

Overutilization

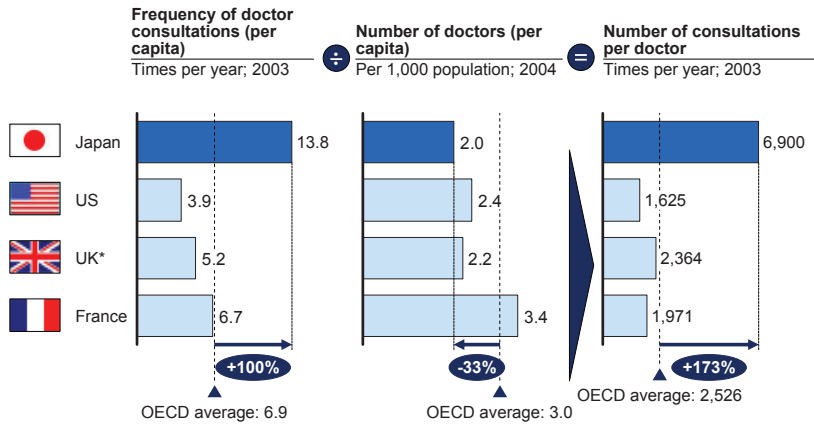
Our analysis indicates that the primary problem Japan's health system faces is overutilization of health care resources. For example, Japanese patients consult physicians vastly more often than patients in other developed countries do (Exhibit 4). On average, a patient in Japan sees a doctor 14 times per year. In contrast, the consultation rate is only about four times per year in the United States and five times per year in the United Kingdom.

Similarly, Japanese patients stay in the hospital three times as long as patients in other developed countries. In Japan, it is often said that the comparatively long lengths of stay result from the country's lack of long-term care facilities (patients needing such care must therefore remain in hospitals). Our analyses indicate, however, that this explanation is inadequate. We found, for example, that prolonged lengths of stay are common in all age groups, even the young (Exhibit 5). Furthermore, when we confined our calculations only to patients who did not need long-term care, we still found that lengths of stay were markedly longer in Japan than in other developed countries (Exhibit 6). We could identify no patient-specific demographic or medical factors that were sufficient to account for the lengths of stay. Prolonged hospitalizations drive up the overall cost of care and, more important, endanger patients' health—studies from multiple countries have shown that the risk of severe infection increases with each day a patient remains in the hospital.

Japan's health system inadvertently promotes overutilization in several ways. Because of the way the system's reimbursement formulas are structured, clinic-based physicians earn more by seeing patients more often (Exhibit 7); similarly, hospitals earn more by continuing to care for patients. Also, the system places no

Exhibit 4

JAPANESE PATIENTS CONSULT DOCTORS MORE OFTEN THAN PATIENTS IN OTHER OECD COUNTRIES DO

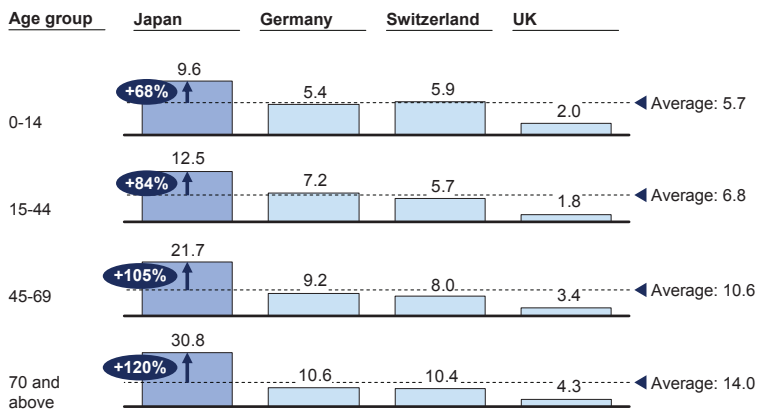


* Data from the National Health Service.
Source: OECD Health 2005

Exhibit 5

LONG LENGTHS OF STAY ARE NOT LIMITED TO THE ELDERLY

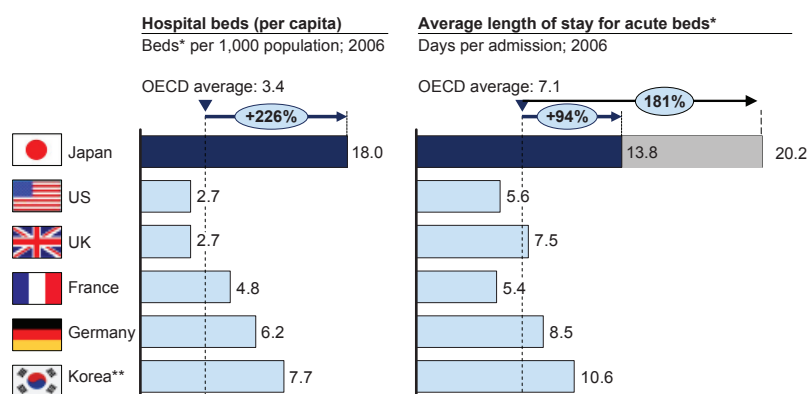
Days; Average length of stay by age group*



* The figures for Japan do not include long-term care beds but do include the acute-care beds occupied by long-term care patients. The figures for the other countries include general ward beds.
Source: MHLW (Patient Survey, Kanja Chosa, 2005), German Federal Statistical Office, Swiss Federal Statistical Office (Medical Statistics), UK (HES, June 2005)

Exhibit 6

JAPAN HAS BOTH MORE HOSPITAL BEDS AND LONGER HOSPITAL STAYS THAN OTHER OECD COUNTRIES DO



* The figures for Japan exclude long-term care beds; they were then calculated both with (light grey bar) and without (dark blue bar) the acute-care beds occupied by long-term care patients. The figures for the other countries include general-ward beds. Even when the acute-care beds occupied by long-term care patients were excluded, length of stay was markedly longer in Japan.
 ** 2003 data used for admittance length for acute beds
 Source: OECD Health Data; MHLW

checks, other than high co-payment rates, on patients' ability to seek treatment as often as they want, wherever they want. Recent increases in the co-payment rates appear to have done little to lower utilization.

Access to physicians

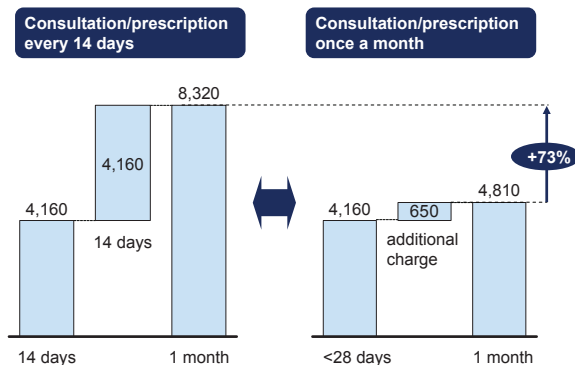
Although the health system's primary problem is overutilization, Japan does have a physician shortage relative to other developed countries. At present, the country has about 200 physicians for every 100,000 people (see Exhibit 4)—one-third below the Organisation for Economic Co-operation and Development (OECD) average (roughly 300 per 100,000 people). Furthermore, the combination of a high utilization rate and a comparatively low number of physicians means that the typical Japanese doctor performs 6,900 consultations a year, almost three times the OECD average of 2,526.

The shortage of physicians may not be as acute as it seems, however, given the overall health of Japan's population. When corrected for disability-adjusted life

Exhibit 7

REIMBURSEMENT SYSTEM REWARDS VERY FREQUENT PATIENT VISITS, EVEN FOR CHRONIC DISEASES NOT REQUIRING FREQUENT CHECK-UPS OR TREATMENT CHANGES

Difference in medical fee* per month by visit frequency; JPY;
hyperlipidemia example**



* Includes revisit fee (710), out-patient administration fee (1520), specific chronic disease administration fee (12,250; up to twice a month), prescription fee (1690), and long-term prescription additional charge (1650; up to once a month).

** Based on 2006 medical fee revision; assumes patient with hyperlipidemia (high cholesterol level), age under 74, treated for one month in a clinic, gets prescription filled in an independent pharmacy with a non-generic drug.

Source: MHLW; McKinsey analysis

years⁵ (a method for assessing the burden various diseases place on a population), Japan is only 16 percent below the average for most other developed countries.

Some areas of Japan are more affected by the physician shortage than others, because the country's physicians are not evenly distributed. Tokyo, for example, has 266 physicians per 100,000 people, but Niigata Prefecture has only 171, and the prefectures surrounding Tokyo have even lower densities (Exhibit 8). Furthermore, not all specialties are affected equally by the physician shortage. Japanese physicians are far more likely to be surgeons or ophthalmologists—and far less likely to be psychiatrists and anesthesiologists—than physicians in other countries are (Exhibit 9).

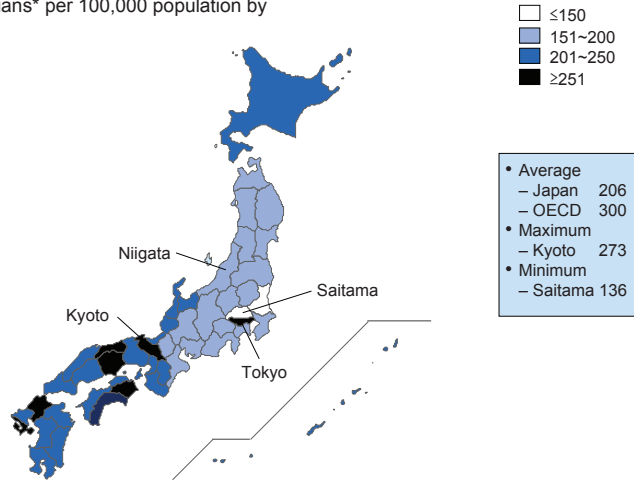
The physician shortage is felt most acutely in hospitals. Although Japanese physicians begin their careers in hospitals, most eventually opt to work in primary care clinics rather than remain on staff as hospital-based specialists (Exhibit 10). An important reason appears to be financial: remuneration is considerably higher in the clinics. In comparison with other developed countries, Japan over-

5 Disability-adjusted life years are calculated by estimating both the number of premature deaths and the number of years patients are affected by illness or disability.

Exhibit 8

PHYSICIANS ARE VERY UNEVENLY DISTRIBUTED ACROSS JAPAN

Number of physicians* per 100,000 population by prefecture; 2006

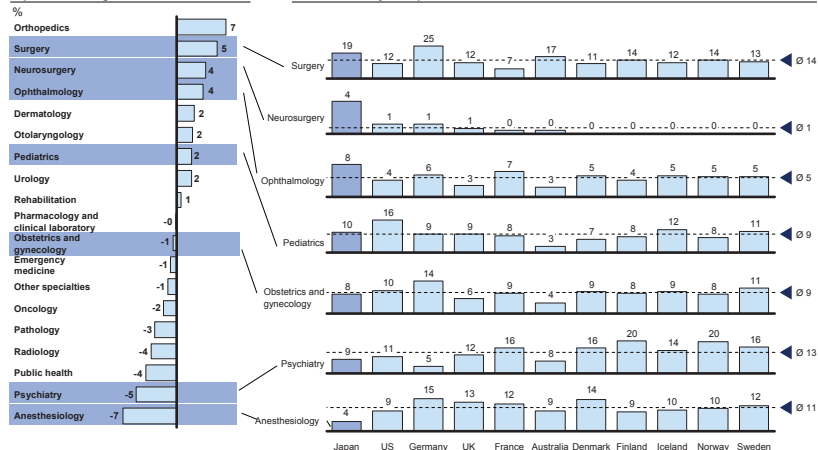


* Physicians working in clinical facilities.
Source: MHLW (Ishi shikaishi yakuzai shi chousa); OECD Health at a Glance 2007

Exhibit 9

JAPAN IS ESPECIALLY SHORT OF PSYCHIATRISTS AND ANESTHESIOLOGISTS

Difference in clinician density between Japan and average of nine other countries



* The numbers shown for each country would sum to 100% if all of the specialties were graphed in the bar charts at right. Thus, for example, surgeons represent 19% of all Japanese physicians but only 12% of US physicians.
Source: Japan: MHLW; Japanese Board of Medical Specialties (2004); US: Physician Characteristics and Distribution American Medical Association (2004); Germany: Bundesärztekammer/National Medical Council (2006); UK: The Information Centre for Health and Social Care (2006); France: DREES - ADELI (2005); Australia: Medical Labour Force Survey (2003); Denmark, Finland, Iceland, Norway, Sweden: "Physicians in the Nordic countries" Nordic Medical Associations (2006)

pays its clinic-based physicians and underpays its hospital-based specialists (Exhibit 11).

The physicians who remain on staff at hospitals are asked to perform a broad range of duties. Japan has no regulations mandating a clear division of roles and responsibilities between clinics and hospitals; the only distinction is size.⁶ Most hospitals, for example, offer outpatient primary care; some clinics provide inpatient acute care, long-term care, or both. Many hospitals also offer mental health or long-term care. Thus, Japan's hospital-based specialists must spend a considerable portion of their time providing primary care to outpatients and looking after a wide range of inpatients. As a result, they have little time to hone their specialized skills and are sometimes unavailable to patients who require their expertise.

In contrast, most other developed countries establish a much clearer distinction between primary and secondary care; furthermore, few of their hospitals provide mental health or long-term care because these services can be offered less expensively in other settings. Their hospital-based physicians are therefore able to devote most of their time to their specialties, which enables them to provide higher-quality, more cost-efficient care.

Another problem that limits Japanese patients' access to hospital-based specialists is that the country has relatively few ancillary health professionals—for example, nurse practitioners, physical therapists, and psychiatric social workers (Exhibit 12). In many other developed countries, these health professionals perform tasks that reduce a hospital-based physician's workload and thereby enable the physician to concentrate on medical issues; however, such workers are not legally permitted to perform these tasks in Japan. If the country were to permit ancillary health professionals to perform these tasks, the burden on hospital-based specialists would be alleviated (although not eliminated).

Access to inpatient care

While Japan does have a shortage of physicians, it has a clear oversupply of hospitals. The country has more than 9,000 public and private hospitals—2,600 more than even the US has. In fact, Japan has twice or more as many hospitals per 100,000 people as most other developed countries (Exhibit 13).

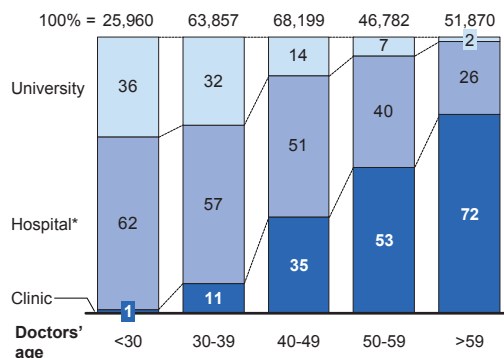
The country also has an excess number of hospital beds—one for every 90

⁶ Clinics can have no more than 19 inpatient beds; hospitals can have 20 or more beds.

Exhibit 10

IN JAPAN, MOST DOCTORS BEGIN THEIR CAREERS IN HOSPITALS BUT LATER SWITCH TO CLINICS

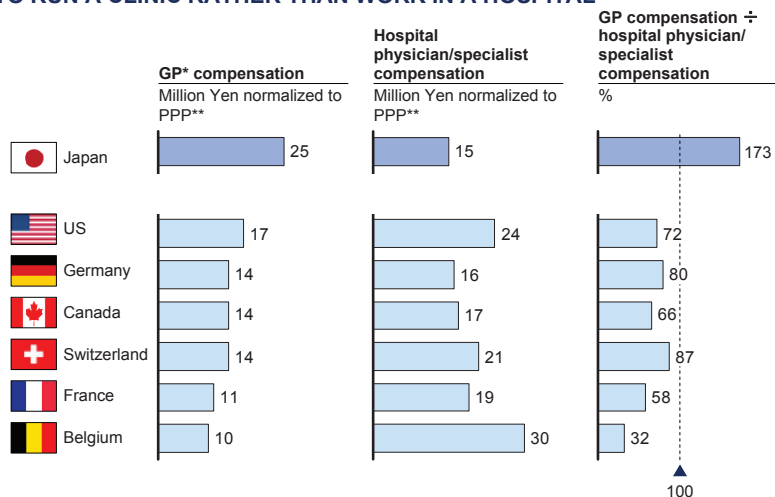
Number of doctors by type of medical provider; %, 2004



* Does not include university hospitals.
Source: MHLW (Doctor, dentist and pharmacist survey, *Ishi shikaishi yakuzaishi chosa*)

Exhibit 11

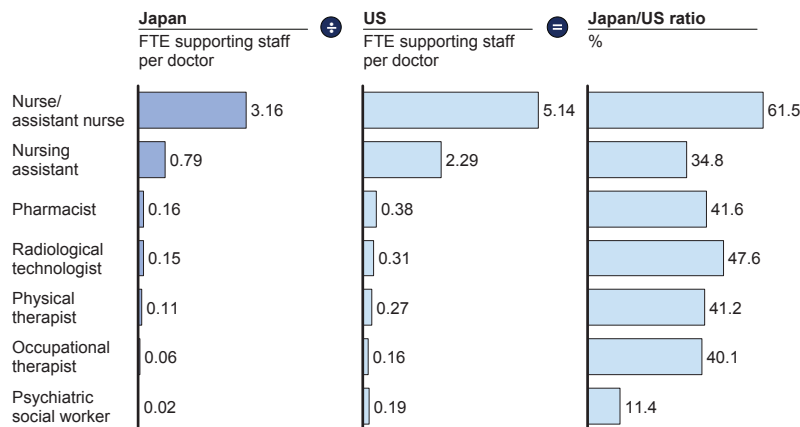
JAPANESE DOCTORS HAVE A STRONG FINANCIAL INCENTIVE TO RUN A CLINIC RATHER THAN WORK IN A HOSPITAL



* Clinic-based physicians for Japan, licensed GPs for other countries.
** PPP, purchasing power parity. Data for the following years used: 2007 (Japan), 2006 (Germany, France, Belgium), 2005 (Canada), 2004 (Switzerland), 2001 (US, simple average of self-employed/salaried used for both GPs and specialists).
Source: OECD Health, MHLW (Survey on Medical Finance, *Dai 16 kai Iryou Keizai Jittai Chousa no Kekka Sokuhou*, Oct. 2007)

Exhibit 12

JAPAN HAS RELATIVELY FEW ANCILLARY HEALTH PROFESSIONALS WHO COULD HELP ALLEVIATE PHYSICIANS' WORK LOAD



Source: MHLW (2005); US Department of Labor (2006)

residents (in comparison, the US has one hospital bed for every 370 residents). These numbers are all the more remarkable in that they include neither the inpatient beds in Japan's 97,000 clinics nor any of the country's long-term care beds.

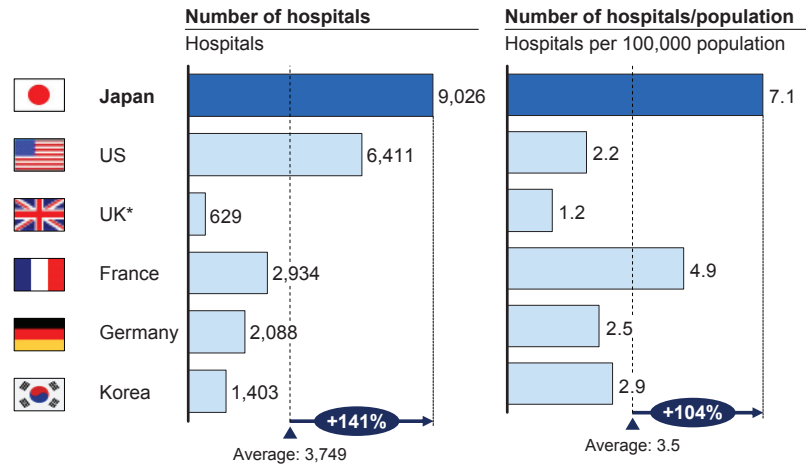
Japan's hospitals and hospital beds do not go empty—on a per capita basis, the country has twice the number of inpatients that other developed countries do (Exhibit 14). As a result, hospital staffing is difficult. For example, although Japan has roughly the same number of nurses per 100,000 people as other developed countries, it has less than one-third the number of nurses per hospital bed (Exhibit 15). In response to complaints from Japan's hospitals about a nursing shortage, the government has moved to legalize the employment of nurses from Southeast Asia. This approach does not address the fundamental problem (the oversupply of beds) and could inadvertently encourage further overutilization (hospitals may be tempted to keep patients even longer to cover the cost of the additional nurses).

Many of Japan's hospitals are privately owned, and there is no central control over hospital openings, expansions, and closings. Although the government has

Exhibit 13

HOSPITAL DENSITY IS TWICE AS HIGH IN JAPAN AS IN OTHER DEVELOPED COUNTRIES

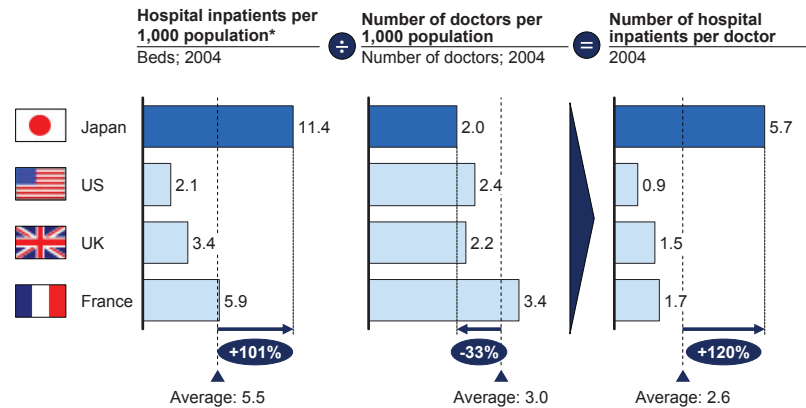
2005



* Data set from The National Health Service was used.
Source: OECD Health 2005; MHLW (*Iryo-Shisetsu-Houkoku*, Healthcare Facility Survey; *Sekai-no-Kousei-Roudou*, World's health, labor and welfare)

Exhibit 14

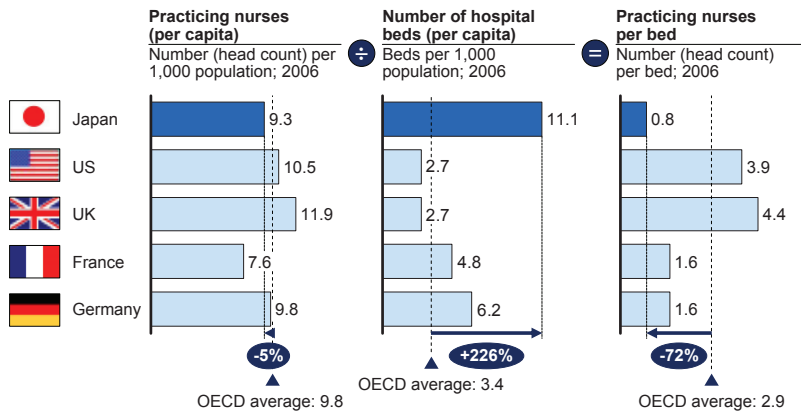
JAPAN HAS A FAR GREATER PROPORTION OF HOSPITAL INPATIENTS THAN OTHER COUNTRIES DO



* Number of beds × utilization rate.
Source: OECD Health; MHLW

Exhibit 15

HIGH NUMBER OF HOSPITAL BEDS CAUSES A RELATIVE SHORTAGE OF NURSES



Source: OECD Health

attempted to limit the number of hospital beds, the attempts have not had much impact. For example, the government has banned any further increase in the number of hospital beds, but it has taken no direct action to lower that number. As a result of this regulation, relatively efficient providers now find themselves unable to expand their bed capacity, while less efficient ones have no reason to decrease theirs. The government did reduce the per diem rates hospitals are paid when patients have prolonged lengths of stay, but this change has produced only a small decrease in average length of stay. It did not result in the dramatic drop in bed counts that occurred when per diem rates were eliminated in other developed countries.

Access to emergency care

The perception that Japan has a physician shortage has been partially fueled by press reports of patients being turned away from emergency rooms (ERs) and suffering severe consequences—even death—as a result. Our analyses indicated that an increasing number of patients are indeed being turned away from one ER and sent to another. However, the physician shortage is only one of several root causes of this problem.

Japanese hospitals are limited in their ability to provide emergency care by the shortage of specialists and the poor use of specialists' time discussed earlier; as a result, the specialists who treat ER patients are severely overworked. Another problem is that hospitals have no financial incentives to offer emergency care; the reimbursement rates make ER patients unattractive. Hospitals therefore turn away such patients by claiming they do not have the capacity to treat them.

Inappropriate utilization is yet another problem. The majority of patients who present to Japan's ERs for treatment have mild conditions that could easily be treated elsewhere. Many Japanese patients are confused about where to seek care; this is not all that surprising given the lack of clear differentiation between hospitals and clinics. In the absence of clear guidance about the appropriate sources of care, patients often default to ERs because they know they can receive treatment there.

Exacerbating the problem in ERs is the fact that ambulance crews in Japan are, on average, not as skilled as the paramedics and emergency medical technicians in other developed countries. Although recent reforms have expanded the scope of what Japan's ambulance crews are permitted to do (for example, they can now intubate patients and give injections), in practice they rarely perform these additional services.

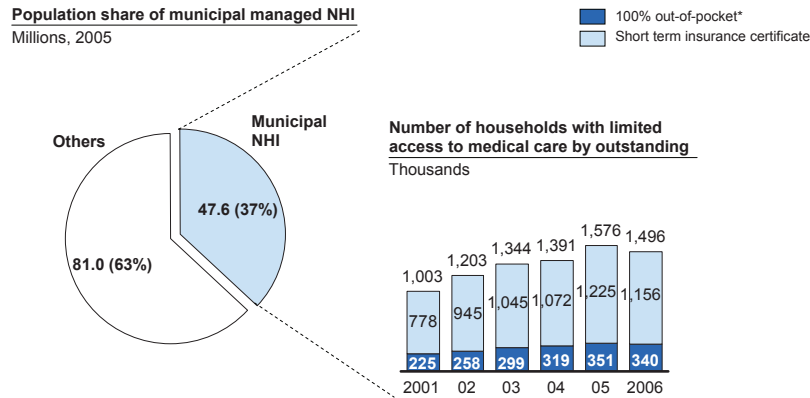
Lack of health insurance

An ancillary issue contributing to access problems is the growing number of people who fail to pay their premiums for national health insurance (Exhibit 16). In Japan, retirees, the self-employed, and the unemployed—approximately 40 percent of the population—are required to buy health insurance for themselves and their household members. However, the annual premiums average ¥151,301 per household, a high price for many people. Thus, an increasing number of households have opted not to pay their health insurance premiums, despite the legal requirement that they do so.

When the premiums are not paid, all members of the household lose their health insurance and, theoretically, must pay their health care expenses out of pocket. If, however, uninsured patients need medical care, they can pay their last two years' premiums and obtain a certificate that temporarily entitles them to reimbursement. (They have to pay all overdue premiums to regain full coverage.) Not all households can afford to pay the two years' premium, though, and thus their

Exhibit 16

NUMBER OF JAPANESE WITHOUT HEALTH INSURANCE IS INCREASING



* Access to medical care is made possible by obtaining a "qualifying certificate for insured person" (*Hi-hokensha shikaku shoumei-sho*) at one's own expense (payment of last two years of unpaid premia). Reimbursable portion of initial full out-of-pocket payment will be reimbursed after settlement of unpaid premiums.
Source: MHLW; McKinsey analysis

access to medical care may be extremely limited. At present, there are more than 300,000 Japanese households with no health insurance coverage, and more than 1.1 million households with only temporary coverage.

Many other developed countries avoid having large numbers of uninsured citizens by instituting measures that maximize the likelihood that premiums are paid. For example, they deduct social security contributions from the wages of even part-time employees or have those contributions covered directly by unemployment benefits. (The US, of course, is a notable exception to this rule.)

QUALITY OF CARE

High utilization rates might be justified if the outcomes achieved were excellent. This is not always the case in Japan, however. For example, some studies have suggested that Japanese patients who suffer heart attacks are more likely to die than are similar patients in other countries (Exhibit 17). Indeed, Japan's heart attack statistics are revealing. The country has a very low incidence of heart attacks, and thus if mortality data are examined on a population level, Japan appears to do quite well—its mortality rate from heart attacks is lower than that of other developed countries. But if the mortality rate is calculated only

among patients who have actually had heart attacks, the situation is reversed: Japanese patients appear to be twice as likely to die as their US peers and three times as likely to die as their peers in France or Germany.

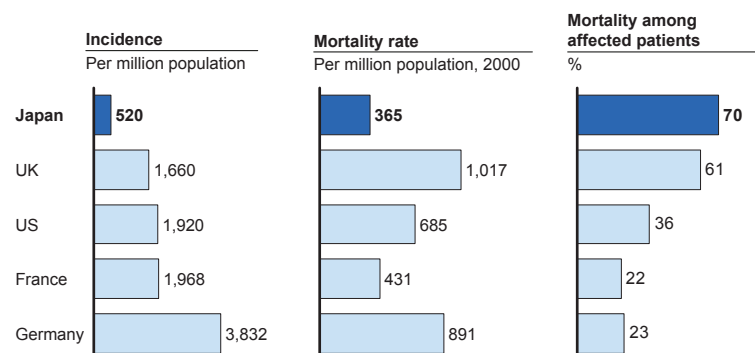
A similar case can be made about stroke. The incidence of stroke is slightly lower in Japan than in other developed countries; however, Japanese patients who suffer a stroke appear to have a higher risk of death than stroke patients in most other developed countries have. This suggests that stroke patients—and heart attack patients—in Japan may not always be getting best-practice care.

Furthermore, it is not only hospitalized patients who are affected; some primary care patients may also be receiving lower-quality care. For example, studies have shown that 70 percent of all Japanese patients given treatment for hypertension nevertheless have persistently elevated blood pressure. Our research among Japanese physicians provides a possible explanation: Many clinic-based physicians appear to be more concerned about the increased risk of adverse reactions associated with high drug doses than are their peers in other developed countries. They fear that adverse reactions could cause their patients to lose trust in them, and thus they are reluctant to prescribe sufficiently strong drug therapy to treat their patients to the goals set by medical guidelines.

Exhibit 17

ALTHOUGH THE JAPANESE ARE LESS LIKELY TO HAVE HEART ATTACKS, THOSE THAT DO ARE MORE LIKELY TO DIE

Incidence of and mortality from acute myocardial infarction*



* The data in this exhibit are derived from multiple sources. Thus, they are not directly comparable, and small differences among the numbers may not be real. Nevertheless, the broader trends shown in this exhibit are highly likely to be true.
 Source: Nishigaki et al. "Assessment of acute...," Circ J 68 2004, 515-519; Wiesner et al. "Vorausberechnungen...," Bundesgesundheitsblatt 45 2002, 438-445; Ministère de la santé, de la jeunesse et des sports, "Réduction des risques cardiovasculaires 2002-2005"; Department of Health, "Mending Hearts and Brains", 2006, WHO mortality database

We do not mean to suggest that all Japanese patients receive poor-quality care—far from it. However, the care delivered in the Japanese health system varies considerably. The quality of cancer care, for example, appears to be markedly higher in Tokyo than in Ibaraki or Kure. In Tokyo, stomach cancer tends to be diagnosed at earlier, more curable stages; as a consequence, five-year survival rates are much better there (Exhibit 18). Similarly, studies have shown that there are wide variations both in how gallbladder disease is treated in Japan and in the outcomes achieved after gallbladder removal.

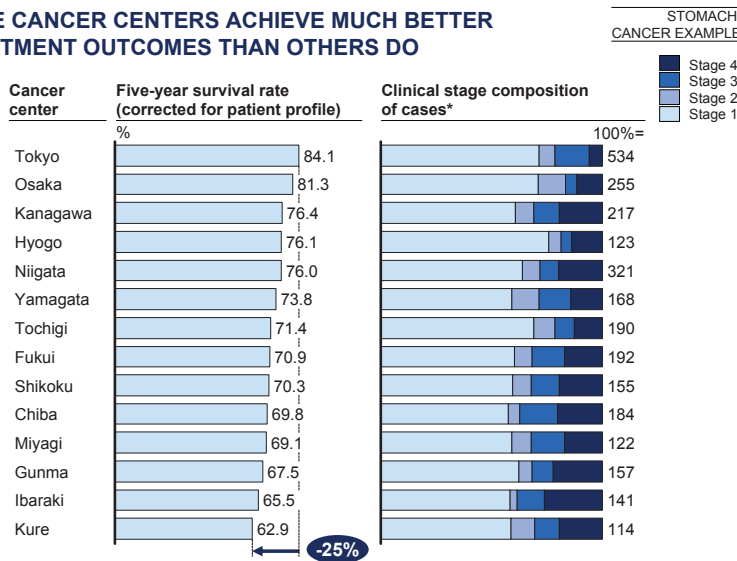
We believe that four factors are primarily responsible for the variability in care quality: the fragmented nature of Japan’s hospital network, the weak standards used to accredit physicians, the absence of strong incentives to improve care quality, and the delays that advances in treatment often face before they are introduced into Japan. Each of these is discussed below.

Fragmented hospital network

In health systems around the world, it has been repeatedly demonstrated that outcomes are better when medical procedures are performed in centers that do large numbers of those procedures. Both mortality rates and lengths of

Exhibit 18

SOME CANCER CENTERS ACHIEVE MUCH BETTER TREATMENT OUTCOMES THAN OTHERS DO



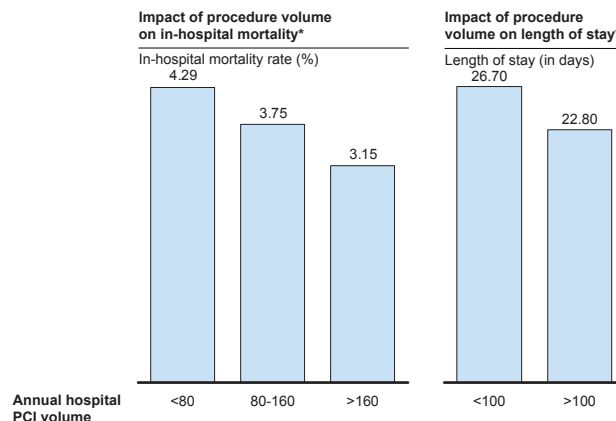
stay, for example, are lower when percutaneous coronary interventions (PCIs)—procedures for opening up blocked arteries—are performed at high-volume hospitals (Exhibit 19). For this reason, the American Heart Association and the American College of Cardiology recommend that PCIs be performed in hospitals that do at least 200 of these procedures per year. Because Japan has so many hospitals, the average number of PCIs done per hospital is only 107 (Exhibit 20). In other developed countries, the averages range from 381 to 775.

Similarly, the mortality rate during coronary artery bypass grafting—a way to replace blocked arteries—is lowest in hospitals that perform at least 100 of these procedures per year (Exhibit 21). The average number of cases per facility is 37 in Japan; it is well over 300 in most other developed countries.

Furthermore, because Japan has so many hospitals, many of its hospitals are small and lack the specialized care units (for example, intensive care units and stroke units) that larger hospitals have. As a result, almost three-quarters of all Japanese stroke patients are treated on regular hospital wards. Yet the in-hospital mortality rate for stroke patients is more than twice as high on the regular wards than in stroke units (9.8 percent versus 4.2 percent, respectively).

Exhibit 19

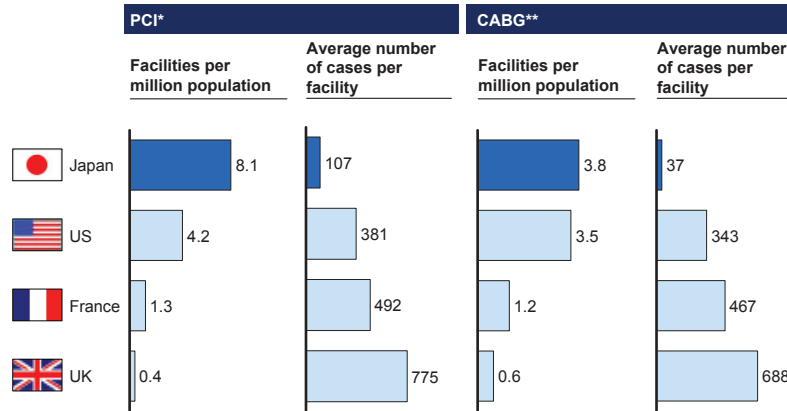
HIGHER CARDIAC PROCEDURE VOLUMES ARE ASSOCIATED WITH BETTER OUTCOMES



* Data from outside Japan: in a Japanese study (Tsuchihashi et al), no correlation between volumes and mortality was observed, likely because all facilities had small volumes (median <90 cases per year).
 Sources: Volume and Outcome – McGrath et al, "Relation between operator and Hospital Volume and Outcomes following PCI in the Era of Coronary Stent", JAMA 284 24 (2000) 3139; Length of Stay – Kusuoka et al, "Disparity in the Process and Outcome of the Treatment for Acute Myocardial Infarction in Japan", Circ J 2005 69 1447-1453; Tsuchihashi et al, "Volume-Outcome Relation for Hospitals performing angioplasty for acute myocardial infarction" Circ J 2004 68 887-891

Exhibit 20

JAPANESE HOSPITALS PERFORM COMPARATIVELY FEW CARDIAC PROCEDURES



* Percutaneous coronary intervention, commonly known as coronary angioplasty or simply angioplasty, is a therapeutic procedure to open up stenotic (narrowed) coronary arteries in patients with coronary heart disease.

** Coronary artery bypass grafting is a surgical procedure performed to replace stenotic (narrowed) coronary arteries in patients with coronary heart disease.

Source: Shihara et al, "Coronary revascularisation...", Jpn Circ J 65 2001, 1005-1010

Weak accreditation standards

In comparison with other developed countries, Japan currently has few accreditation standards governing how physicians practice. A medical license is granted for life; there are no requirements for license renewal or recertification. Furthermore, Japan does not compel physicians to undergo any type of continuing medical education.

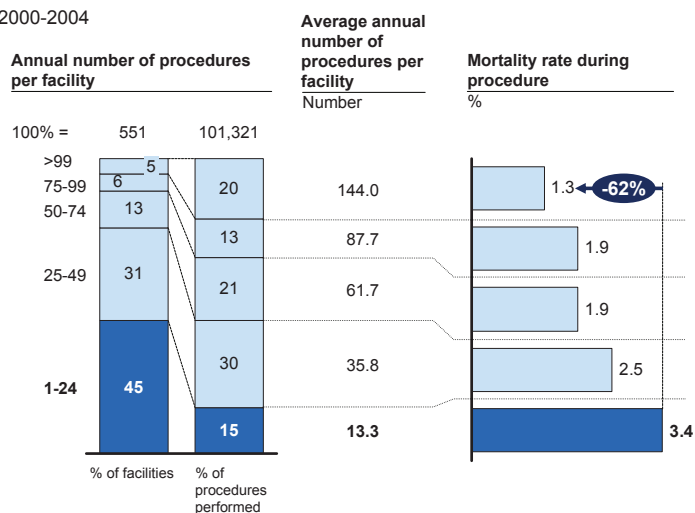
A feature unique to Japan's health system is that physicians are allowed to declare areas of specialization, even if they have not trained in those areas, and they can declare as many specialty areas as they want. (Admittedly, few physicians take advantage of this option.)

Japan does have board-certification programs for specialists, but their requirements are not as stringent as those in other developed countries (Exhibit 22). In some cases, no examinations are required. Training in the specialty is mandatory for board certification (but not for practice, as noted above); however, no central agency is responsible for overseeing the quality of the residency programs or the criteria for certification. Yet even though Japan's requirements for board certification are weak, the country has markedly fewer certified specialists than other developed countries do.

Exhibit 21

SOME REPORTS SUGGEST THAT LOWER PROCEDURE VOLUMES LEAD TO HIGHER DEATH RATES

CABG; 2000-2004



Weak accreditation standards make it difficult to ensure care quality and thus may help explain the variability in care delivery we described earlier. Most other developed countries have clearly defined pathways for training and accrediting primary care physicians and specialists. This enables both groups of physicians to get the education and experience they need to provide patients with high-quality care. Japan's weak accreditation standards also contribute to patients' confusion about whom to consult for care (or where they should go). In a recent survey, less than half of Japanese patients said that they consult the same physicians regularly. And of those who did say that they had regular doctors, very few mentioned care quality or other clinical factors as the reason for their choice of providers. The overwhelming reason these patients cited for their selection of physician was "convenient location." Furthermore, a substantial number of the other respondents explained that they did not have a regular physician because they do not know how to choose one.

Lack of incentives to improve care quality

Other than academic studies, which rely on hospitals providing data to researchers on a voluntary basis, Japan has few mechanisms for evaluating hospital

Exhibit 22

JAPAN'S SPECIALIST ACCREDITATION REQUIREMENTS LACK THE RIGOR FOUND IN OTHER COUNTRIES

■ Differences

Area	Japan	US	UK	Australia	Canada
Requirements for specialists	<ul style="list-style-type: none"> • Training • Exam (not all cases) 	<ul style="list-style-type: none"> • Training • Exam 	<ul style="list-style-type: none"> • Training • Exam 	<ul style="list-style-type: none"> • Training • Exam 	<ul style="list-style-type: none"> • Training • Exam
Training program	<ul style="list-style-type: none"> • Training programs are planned by and provided at trainers' decision 	<ul style="list-style-type: none"> • Numbers of slots per program are centrally controlled 	<ul style="list-style-type: none"> • Numbers of slots per program are centrally controlled 	<ul style="list-style-type: none"> • Numbers of slots per program are centrally controlled 	<ul style="list-style-type: none"> • Numbers of slots per program are centrally controlled
Accreditation criteria	<ul style="list-style-type: none"> • Set by the academic societies 	<ul style="list-style-type: none"> • Set by the academic societies 	<ul style="list-style-type: none"> • Set by the academic societies 	<ul style="list-style-type: none"> • Set by the academic societies 	<ul style="list-style-type: none"> • Set by the academic societies
Responsible for setting criteria	<ul style="list-style-type: none"> • Academic societies 	<ul style="list-style-type: none"> • National cross-specialty authority (ABMS¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (GMC¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (AMC¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (MCC¹)
Responsible for the training program	<ul style="list-style-type: none"> • Academic societies 	<ul style="list-style-type: none"> • National cross-specialty authority (ACGME¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (PMETB¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (AMC¹) 	<ul style="list-style-type: none"> • National cross-specialty authority (RCPCSC¹)

¹ ABMS = American Board of Medical Specialties, GMC = General Medical Council, AMC = Australian Medical Council, MCC = Medical Council of Canada, ACGME = Accreditation Council for Graduate Medical Education, PMETB = Postgraduate Medical Education and Training Board, RCPCSC = Royal College of Physicians and Surgeons of Canada.
Sources: MHLW; Japan Board of Medical Specialties; ABMS; ACGME; GMC; PMETB; AMC; CMA; RCPCSC

performance or even for ensuring that the treatments it is paying for have actually been delivered. For example, it does not systematically collect and analyze treatment and outcomes data from all hospitals, as the UK, the US, and many other developed countries do. As a result, it is unable to institute the types of pay-for-performance programs that those countries use. In the UK, for example, the National Health System (NHS) has implemented programs that reward both hospitals and general practitioners for delivering high-quality care.

These programs define care quality using the best available research evidence, which is then synthesized into a clinical care pathway—a specific set of steps that all providers are expected to follow when treating specific patients. The care pathway for a patient with pneumonia, for example, would specify the types of laboratory tests that should be done and the antibiotic regimens that should be administered.

The NHS can implement its pay-for-performance programs because the UK has an independent organization, the National Institute for Health and Clinical Excellence (NICE), that is tasked with developing care pathways, evaluating the efficacy and cost-effectiveness of new health technologies (including new drugs),

and issuing recommendations on disease prevention. Germany and many other developed countries have similar organizations, although their responsibilities are not as extensive as NICE's. Japan does not have an independent organization akin to NICE, nor does it have a central authority that can force hospitals to change. Therefore, in the absence of substantive reforms, it would be quite difficult for Japan to implement pay-for-performance programs, or even the use of care pathways, throughout its health system. (The system's fragmentation also makes these actions difficult.)

The lack of performance data adversely affects the quality of care delivered in a second way: It prevents Japan from offering patients information that would allow them to compare providers. As a result, Japanese patients are far less likely than their peers in other developed countries to report that they are satisfied with the information available about hospitals, clinics, or specific doctors.

In contrast, many other countries have started to provide patients with online information about health care providers. Norway, for example, has a Web site that enables patients to determine which hospitals perform specific procedures, how often the physicians at each hospital perform those procedures, and how long the wait time to be admitted to each hospital would be. It even permits patients to book appointments at their preferred hospital. Similarly, in the US, the Centers for Medicare and Medicaid Services (CMS) provides patients with online access to a wealth of data about a hospital's performance, including the number of specific procedures it performs, the rate at which evidence-based standards are met, and the outcomes achieved. Private health insurers in the US have started to follow CMS's example and are extending it to include evaluations of individual physicians. In the US, it is even possible to compare hospitals' mortality rates.

Public availability of this type of information helps to improve the quality of care delivered (no provider wants to be lowest on the list). In Japan, this information would help patients better understand where they should seek treatment for specific conditions; it might even help drive down demand for health care by reminding patients that no treatment is without risks.

Delays in the introduction of treatment advances

Advances in treatment—including new drugs, medical devices, and procedures—are often not introduced in Japan until several years after they were introduced in other developed countries. For example, new drugs are launched in Japan an

average of 7.3 years after they are launched in the US and the European Union. In some cases, these delays have caused considerable harm to Japanese patients. For example, the country was several years behind the US and EU in approving the use of bortezomib for multiple myeloma, a type of cancer that is often fatal. Yet bortezomib has been shown to produce remissions in many patients with rapidly advancing disease.

Several reasons explain why treatment advances are frequently delayed in Japan. Because the country's hospital-based specialists are so overworked, they cannot easily participate in clinical trials or otherwise investigate new treatments. The fragmented nature of the hospital system makes it difficult to conduct clinical trials in Japan or to disseminate information about advances in care. Japan's Pharmaceuticals and Medical Devices Agency (PMDA), which is responsible for approving new drugs and devices, is understaffed. Furthermore, the PMDA usually insists that some clinical trials be conducted in Japan before a new drug or device can be approved—yet as we have shown, the health system is not set up to support clinical trials on a grand scale.

COST-EFFECTIVENESS

A number of arguments have been put forth asserting that Japan's health system is more cost-effective than the health systems in most other countries, but more careful analysis suggests that these arguments may be invalid. For example, some claim that the system is cost-effective because it spends comparatively little but achieves exceptionally good outcomes. As we have discussed, however, the health of the Japanese people may result as much from other factors (for example, diet, exercise, and labor-mandated health checks) as from anything the health system has done.

Others have argued that Japan's health system is cost-effective because it is able to deliver secondary and tertiary medical care within a reasonable budget. This is true, but only because its hospital-based specialists are overworked and underpaid—hardly a sustainable formula, as the ongoing flight of physicians from hospitals to clinics demonstrates.

It has also been said that Japan's health system is cost-effective because the country has been able to hold down increases in its health care spending to a level below that of other countries (Exhibit 23). However, the primary mechanism Japan has used to control health care spending is repeated cuts in the fees it pays to physicians and hospitals and the prices it pays for drugs and equipment,

and this approach is also unsustainable. The fee cuts do little to reduce the supply of or demand for health care, and could inadvertently increase them. And there is only so far that prices can be reduced before products and services become unavailable and quality of care suffers.

We believe that in the absence of substantive reforms, three factors will prevent Japan's health system from becoming—and remaining—truly cost-effective: the system's reliance on fee-for-service reimbursement, its lack of coordination, and its unwillingness to consider the relative value of the services being delivered when it is applying cost controls.

Fee-for-service reimbursement

As we have shown, the amount of medical care delivered to Japanese patients is highly uneven: There are far more physician consultations than are probably necessary, but patients may not be able to get specialist advice when they need it. Hospital stays are often far too long, but emergency care is not always available. In large measure, these variations in the availability of care reflect the financial incentives built into Japan's fee-for-service reimbursement formulas, as well as the working conditions its physicians face. Our analyses indicate that, in general, treatment volumes are high in areas that are supported with strong financial rewards (for example, primary care); however, they are low in areas with inadequate reimbursement rates or poor working conditions (for example, emergency care and anesthesiology).

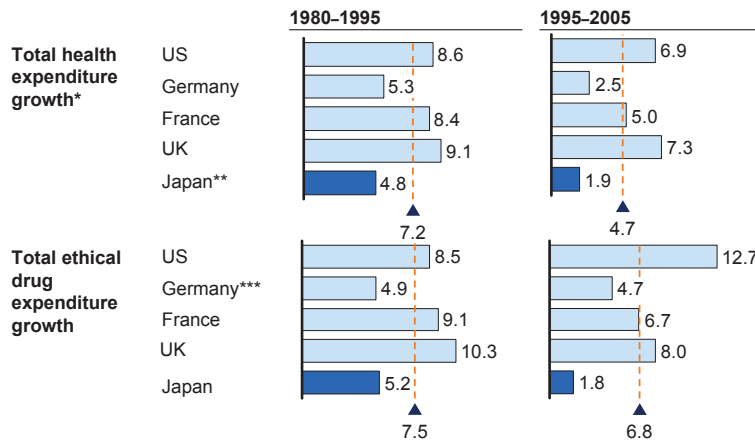
Because Japan's reimbursement formulas include fees for all services delivered, they tend to encourage high volumes of activity. For example, primary care physicians in Japan are allowed to bill separately for examining a patient, writing a prescription for that patient, and then filling the prescription at their clinic's pharmacy. This reimbursement formula may be one of the reasons that Japanese patients use markedly more prescription drugs than their peers in other countries do (Exhibit 24).

Hospital length of stay provides another good example of the unintended consequences that fee-for-service reimbursement can promote. Until recently, all Japanese hospitals were paid a per diem rate for each day a patient was admitted, and they were able to charge separately for many diagnostic tests and procedures. Although the per diem rate decreased as length of stay increased, the rate of decline was not very steep, and thus it was in the hospitals' financial interest to keep patients as long as possible. And because the country has a significant oversupply of hospital beds, there was rarely a need to discharge pa-

Exhibit 23

JAPAN HAS BEEN SUCCESSFUL IN HOLDING DOWN ITS SPENDING ON HEALTH CARE

Per-capita expenditure growth; compound annual growth rate (CAGR); %



* Based on nominal expenditure in local currency.
 ** Japan 1995-2005 data are based on national medical care expenditure, not including private medical care, health checkups, nursing care, OTC drugs.
 *** Germany 1985 data does not include the former German Democratic Republic.
 Source: OECD Health Data 2007; MHLW National Medical Care Estimates; IMS World Review; McKinsey analysis

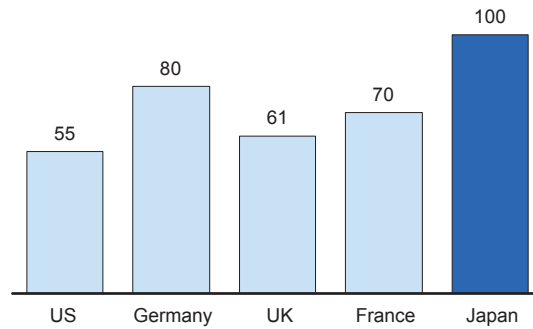
tients to free up beds for other patients. As we discussed earlier, our analyses were unable to find sufficient medical or demographic factors that would explain Japan's prolonged lengths of stay. However, the analyses did reveal that a very strong predictor of average length of stay was a hospital's bed occupancy rate—the more free beds a hospital had available, the longer its patients' length of stay (Exhibit 25). Support for this hypothesis comes from another analysis we conducted, which showed that there is little variation in bed utilization rates between regions with a high or low number of hospital beds (Exhibit 26). This finding suggests that in regions with a high number of beds, many patients remain in the hospital longer than is necessary. Most Japanese hospitals operate in the red (a consequence of repeated fee cuts), and so they can hardly be blamed for trying to maximize their per-patient revenues. The result, however, is unnecessarily high costs for the health system.

Japan recently introduced two changes to help circumvent this problem. First, it increased the extent to which per diem rates decline for prolonged hospitalizations. This change has helped lower average lengths of stay somewhat. Our analyses showed, however, that a much more significant cause of the reduced lengths of stay is the recent move of many long-term care patients from hospitals to separate facilities.

Exhibit 24

JAPAN HAS A HIGH VOLUME OF PRESCRIPTIONS

Average amount of treatment days prescribed per capita;
bilateral comparison with Japan indexed at 100; 2004



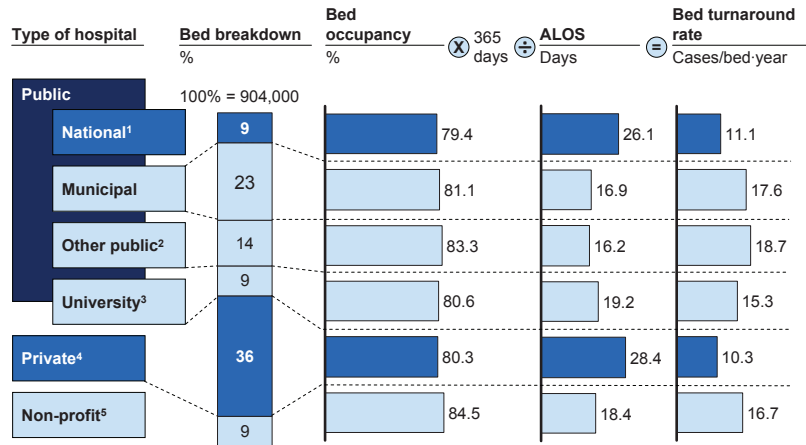
Source: IMS MIDAS; OECD Health Data 2005; US Census Bureau; MOFA; Statistics Bureau of Japan; McKinsey analysis

The second change is the introduction of the DPC (diagnosis procedure combination) system in some hospitals. Under this system, hospitals are reimbursed a flat amount based on the patient's diagnosis and a variable amount based on length of stay. The flat payment is designed to cover the cost of the typical services that a patient with a given diagnosis would require, and thus there are limits on the number of additional services for which hospitals can charge separately. However, hospitals can still use fee-for-service reimbursement to their advantage. Experience to date suggests, for example, that many hospitals are responding to the DPC system by minimizing the number of diagnostic tests and procedures that are performed while patients are in the hospital; instead, those tests and procedures are being performed before the patients are admitted or after discharge (when the hospital can get separate reimbursements for them).

Furthermore, there is little evidence that the DPC system is having any significant impact on length of stay; we believe this is because it does not impose a flat reimbursement rate for all services, regardless of length of stay. In comparison, the DRG (diagnosis-related group) systems used in many other developed countries, which do impose flat fees for all services provided, have often reduced length of stay significantly.

Exhibit 25

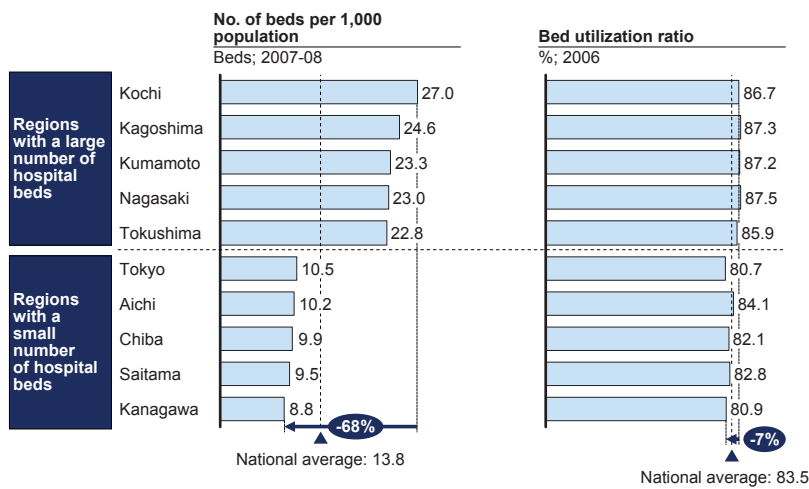
AVERAGE LENGTH OF STAY (ALOS) SEEMS DRIVEN BY FREE CAPACITY



¹ Includes National Hospital Organization, MHLW, Japan Labor Health and Welfare Organization (Rosai), and other national hospitals but excludes national university hospitals.
² Hospitals run by health insurance associations, Welfare Federation of Agricultural Cooperatives (Kouseiren), Red Cross, Saisei-kai Imperial Gift Foundation, Hokkaido Community Service Association, and All Japan Federation of National Health Insurance Organization (Kokuhō).
³ Hospitals affiliated to universities.
⁴ Hospitals run by health corporations (Iryo-Houjin), companies, other corporations, and individuals.
⁵ Hospitals run by public corporations (Kousei-Houjin), social welfare corporations (Shakai-Fukushi-Houjin), and Health Co-operative Association (Iryo-Seikyō).
 Source: MHLW (Hospital Report 2005, Byouin Houkoku); McKinsey analysis

Exhibit 26

HOSPITAL BED UTILIZATION RATES ARE SIMILAR REGARDLESS OF BEDS PER CAPITA



Source: MHLW; MIC

Lack of coordination

Just as Japan lacks central control over its hospital network, so too does it lack central control over medical practice and the allocation of medical resources. There is no agency or institution responsible for establishing a clear vision or targets for the country's health care providers, and there are no mechanisms to force providers to take a more coordinated approach to clinical care or the acquisition of medical equipment. Japanese payors currently have no incentive to take on a role of this type, and thus they are unable to encourage more cost-efficient care delivery, as the payors in many other developed countries do. Individual payors also lack the ability to make case-by-case reimbursement decisions. As a result, the health system's costs are unnecessarily high, and—perhaps more importantly—there is insufficient pressure to force the system to achieve greater coordination and consolidation and thereby improve care quality.

For example, Japanese researchers recently calculated that among patients undergoing gastrectomy (surgical removal of part or all of the stomach), the use of a care pathway lowers treatment costs by 41 percent and length of stay by 30 percent. Japan cannot reap either the clinical or financial benefits of such pathways because it has no mechanism to compel their use. Furthermore, because most of the country's hospitals are small and operate independently, they lack the resources to design and implement significant changes to their treatment approaches.

Similarly, the country has overinvested in many types of very expensive medical equipment because it does not coordinate purchasing. On a per capita basis, Japan has four times as many CT (computed tomography) scanners and MRI (magnetic resonance imaging) machines as most other developed countries do (Exhibit 27). However, many of these machines, particularly those in hospitals with fewer than 400 beds, are markedly underutilized (Exhibit 28). In Japan's smallest hospitals, MRI utilization rates are almost 60 percent below what is considered efficient usage.

Similarly, Japan has more PET (positron emission tomography) scanners than it needs. These machines, and the cyclotrons (small nuclear reactors) required to feed them, are even more expensive than CT scanners and MRI machines. The US has one PET scanner for every seven million people; Japan has one for every two million. On average, each PET scanner in the US performs 427 examinations

annually; each machine in Japan is used for only 107 examinations a year.

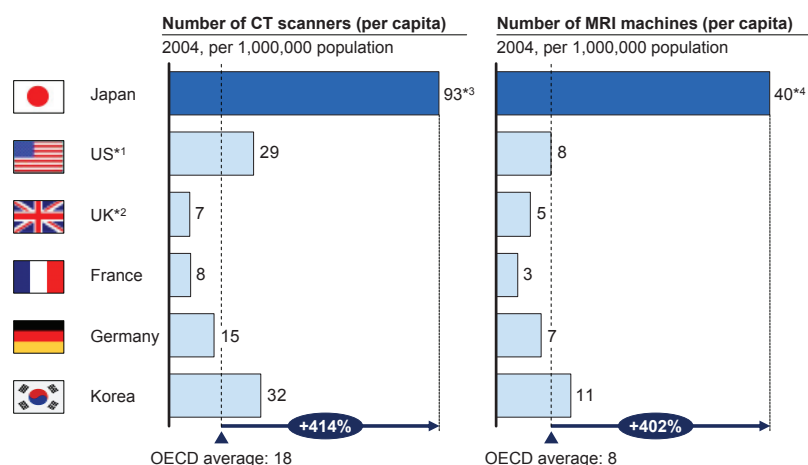
The very size of Japan's health system—a symptom of its lack of coordination—prevents it from operating cost-effectively. Many hospitals, for example, are too small to achieve economies of scale. Indeed, the financial performance of Japan's private hospitals correlates directly with their size (Exhibit 29); those with fewer than 100 beds have an EBITDA (earnings before interest, taxes, depreciation, and amortization) margin of -9 percent, whereas those with more than 700 beds have an EBITDA margin of +3 percent. We must acknowledge, however, that fee-for-service reimbursement makes it very difficult to evaluate the financial performance of any Japanese hospital. Those that do operate efficiently (for example, by discharging patients sooner or avoiding unnecessary procedures) have lower costs than do those that operate inefficiently, but they also receive lower reimbursements. As a result, most Japanese hospitals have comparable, albeit negative, profitability.

Unwillingness to use value-based cost controls

Many of the cost-control measures that Japan has applied to its health system have attempted to “spread the pain” relatively evenly. This approach may be politically expedient, but it fails to account for the relative value of the services

Exhibit 27

JAPAN HAS AN EXTREMELY HIGH PENETRATION OF EXPENSIVE DIAGNOSTIC EQUIPMENT

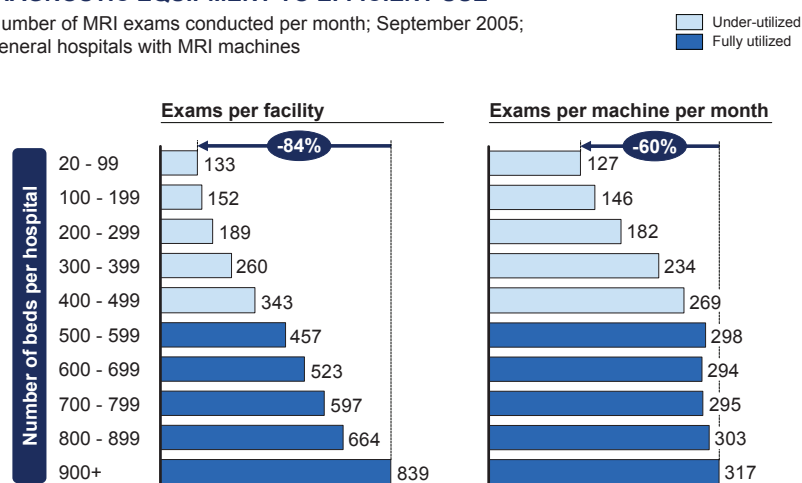


^{*1} 2003 data.
^{*2} Data set from The National Health Service is used.
^{*3} 2002 data.
^{*4} 2005 data.
 Source: OECD Health Data 2005; Frost and Sullivan; MHLW (*Iryo-Shisetsu-Chosa*, Healthcare Facility Survey); McKinsey analysis

Exhibit 28

MANY JAPANESE HOSPITALS ARE TOO SMALL TO PUT EXPENSIVE DIAGNOSTIC EQUIPMENT TO EFFICIENT USE

Number of MRI exams conducted per month; September 2005;
general hospitals with MRI machines



Source: MHLW (Iryo-Shisetsu Chosa, Healthcare Facility Survey); McKinsey analysis

affected by the cost controls.

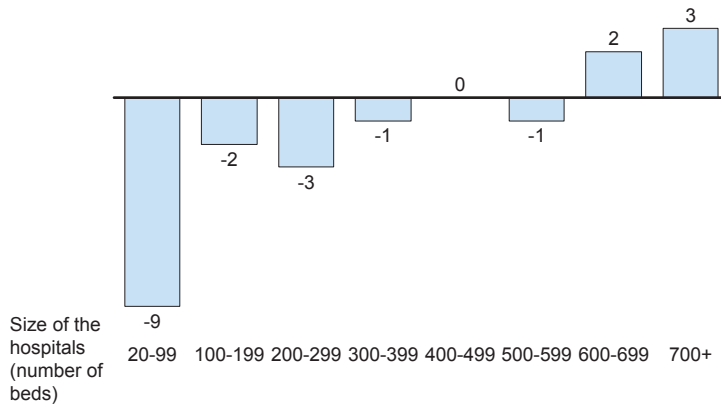
For example, by cutting fees across the board, Japan makes no distinction between best-practice providers and those who offer inefficient or poor-quality care. In fact, the fee cuts may even reward inefficiency by persuading physicians to schedule additional consultations or encouraging hospitals to provide more services than are medically necessary.

Similarly, Japan's repeated use of across-the-board price cuts may inadvertently promote inefficient drug utilization in two very different ways. First, the price cuts have kept the country's pharmaceutical spending down, but they have done nothing to promote the use of generic drugs, which is a more effective lever for long-term cost control. Many other developed countries used forced substitution, tiered co-payments, or other mechanisms to ensure that less expensive generic drugs are used whenever possible.⁷ As a result, more than half of all prescription drugs sold in those countries are generics; in Japan, generics have

⁷ In countries that used forced substitution, pharmacies must fill prescriptions with a generic equivalent whenever possible. Tiered co-payments require patients to pay a higher amount for originator drugs than for their generic equivalents.

Exhibit 29**LARGER HOSPITALS SEEM TO BE RUN MORE COST EFFICIENTLY THAN SMALLER HOSPITALS**

EBITDA % at private hospitals by bed number; 2005, %, revenue = 100%

Source: Japan Hospital Association (*Byoin Keiei Jittai Chosa Houkoku*, Management Survey of Hospitals 2006)

only a 19 percent market share. Most of these countries also encourage generics manufacturers to price their products as low as possible. We estimate that Japan could save up to ¥2.5 trillion annually if it could increase its use of generic drugs to a rate comparable to that in the UK or Germany; the savings could reach ¥3.6 trillion if generic drugs became as prevalent in Japan as in the US and their prices were as low (relative to the cost of the original products) as they are in the US. The government has recognized this and has introduced various measures to promote generics use. However, Japanese physicians appear to be reluctant to prescribe generics, and thus the current pace of adoption is slow. The government is therefore unlikely to achieve its goal of having 30 percent of all drugs prescribed be generics by 2011.

Second, across-the-board price cuts may inadvertently promote inefficient drug utilization because they do not put any limits on the use of medications once marketing approval is granted. Several other countries have developed highly nuanced methods for controlling drug use. Some, for example, no longer reimburse automatically when certain very expensive medications are prescribed, even for approved indications; instead, they agree to reimburse only in carefully defined clinical circumstances. In some cases, prior authorization (preapproval) is required. Furthermore, the countries apply these types of restrictions not only to drugs, but also to many aspects of diagnosis and treatment, and thus the restrictions cover a far greater share of overall medical spending than mere

drug costs. Japan has not yet adopted these targeted approaches for controlling health care costs.

The introduction of the DPC system is another example of what can go wrong with a spread-the-pain approach. When Japan inaugurated this system, it established a separate fee schedule for each hospital, because it wanted all hospitals to be affected by the new system in an equal way. Under the old per diem system, the hospitals' average reimbursement rates had varied widely, and Japan did not want the hospitals with higher-than-average reimbursement rates to suffer a disproportionately large decrease in revenues, something that would have happened if the hospitals were paid at the same rate under the DPC system. Unfortunately, the variations in reimbursement rates did not always arise from logical factors, such as differences in the types of patients treated at each hospital. In many cases, they simply reflected inefficiencies in care delivery. The DPC system has perpetuated this problem.

IMPEDIMENTS TO REFORM

Japan has instituted a number of efforts designed to reform parts of its health system, but these efforts have had only limited success to date. We believe that several interrelated factors are hindering the country's attempts at reform. As we have shown, the system's shortcomings are often misdiagnosed, and proposed solutions often fail to address root causes—in part because the root causes are sometimes unrecognized, but also because the Japanese government has not always been willing to grapple with them. Indeed, we believe that the largest factor impeding reform is political.

We came to this conclusion after conducting three sets of analyses. First, we developed a list of the most pressing problems affecting the health system and identified the governmental interventions that would be most likely to correct them (Exhibit 30). Governments can use three types of levers to implement change:

- **Mandates** are laws or regulations that compel the system's participants to modify the way they behave.
- **Incentives** (financial or nonfinancial) are a less rigid type of lever. Positive incentives encourage change by rewarding participants for certain types of behavior; negative incentives also encourage change, but by "punishing" participants for less desirable behaviors.

-
- **Awareness campaigns** and **education** simply inform participants of the need for change.

This analysis revealed that about two-thirds of the health system's problems would respond best to mandates. For example, new legislation or regulations would be required to give the government or independent agencies greater control over physician credentialing and the number of hospitals. In contrast, incentives would be the best mechanism for discouraging frequent office visits and prolonged lengths of stay. In most cases, awareness campaigns and education would play only a supporting role in promoting change (for example, educational programs would be required if Japan wanted to increase its pool of ancillary health professionals, but these programs would have little impact unless legislation authorizing these professionals to perform certain tasks were passed).

Next, we examined 16 initiatives the Japanese government has recently taken to improve its health system. We began by mapping these initiatives against the system's most pressing problems. This analysis showed that most of the initiatives were designed to address access problems or quality of care. However, none of the initiatives dealt with the country's weak accreditation standards, and only a few attempted to alter its reliance on fee-for-service reimbursement.

We then looked at the types of levers each of these initiatives employed to see if they corresponded to the levers we had identified as likely to be most effective (Exhibit 31). We also evaluated whether the initiatives were substantive enough to achieve the desired impact. In many cases, we found that the government was pulling the right levers, but the initiatives were often too weak to effect real change. For example, the government has established financial and nonfinancial incentives to encourage more physicians to work in underserved areas; however, the incentives are too small to produce the desired effect. Similarly, the government has issued mandates designed to improve care delivery and medical safety—for example, it is requiring the National Hospital Organization (NHO) to establish an assessment system that measures clinical outcomes. However, the NHO is not completely independent of the hospitals that it will be assessing, and thus the credibility of its assessments remains unclear.

ADDRESSING KEY PROBLEMS EFFECTIVELY

If Japan wants to develop a reform program that addresses its health system's problems effectively, it must begin by reaching consensus on the root causes

Exhibit 30

MANY OF THE ISSUES WITH JAPAN'S HEALTH CARE SYSTEM CAN BE SOLVED THROUGH REGULATION AND CONTROL

	Underlying causes observed	Type of policy lever		
		Mandate/ regulation	Incentive	Education/ awareness
Access	• Reimbursement system encourages frequent visits/long stays		✓	
	• No controls to limit supply of inefficient medical services	✓		
	• No strictly regulated role definitions/divisions	✓		
	• No restrictions or incentives to control patient access	✓	✓	
	• No central control on physician allocation according to need	✓		
	• Incentives encourage physicians to move from hospitals to clinics		✓	
	• Lack of empowerment of and education for support staff	✓		✓
Quality	• Limited central control over opening/closing of institutions	✓		
	• No regulations to divide roles/responsibility among providers	✓		
	• Limited information for patients to determine where to go	✓		✓
	• No mandates covering accreditation criteria and training curricula	✓		✓
	• Low investment in continuous training			✓
	• No strict governmental control over quality:			
	– Systematic evaluation of outcomes, defined care standards	✓		
– Punishment for violations, publication of outcomes data		✓		
	• No system to reward top specialists		✓	
Cost-effectiveness	• Fee-for-service pricing rewards more activity and longer stays		✓	
	• Weak oversight over what is actually being reimbursed	✓		
	• No clear assessment of cost effectiveness	✓		
	• Limited central control over medical resource allocation	✓		

Source: McKinsey analysis

of the system's most pressing problems (the issues that must be addressed if change is to occur). In addition, it must develop a plan for overcoming the key obstacles that have prevented reform until now. Next, Japan must develop a vision for its future health system—what the principles of the system should be, and what the system should achieve. Once agreement on that vision has been reached, Japan must identify potential reforms that will change the current system in the right way. Finally, it must develop a long-term implementation plan. We describe each of these five steps below.

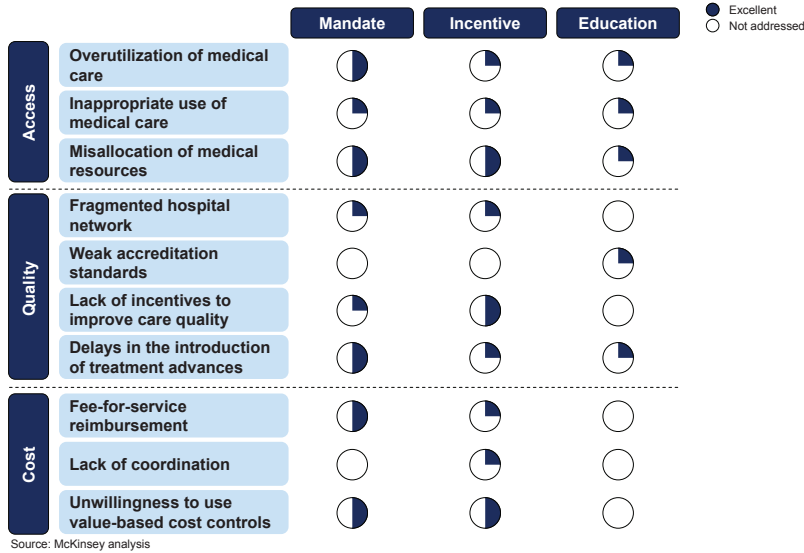
As it is taking these steps, Japan should remember that there is no one “right” way to reform a health system—no single change or set of changes must always be used. In our work with other health systems, however, we have found that the seven changes in Exhibit 32 can be enormously helpful in getting a reform program off the ground.

Identifying root causes

Physicians are trained to look past symptoms to identify the underlying cause of a patient's illness and then to develop a treatment plan. Japan can take advantage of this training by asking its top physicians to conduct a national review of the health system. During this review, the physicians could diagnosis

Exhibit 31

MOST GOVERNMENT INITIATIVES TO REFORM THE HEALTH SYSTEM HAVE BEEN INSUFFICIENT TO YIELD MAXIMUM IMPACT



the underlying causes of the system’s problems and then set clear targets for improvement. The UK used this approach with great success when it began to reform the NHS.

To help these physicians begin their discussions, we grouped the root causes we had identified in our analyses into three categories. Each of these categories reflects a structural issue that is threatening the system’s sustainability. The first issue is the lack of control over both the supply of and demand for medical services, and the access problems that lack of control creates. In too many cases, the supply of services appears to be determined more by the financial imperatives the system forces on providers than by medical need. And in myriad ways, the current system places no checks on the demand for medical services (for example, by permitting patients to seek emergency room and inpatient care without restrictions).

Because planning is often absent, the system has few mechanisms to ensure that the supply of and demand for medical services are appropriate and in equilibrium. As a result, Japan has too many hospitals but too few board-certified specialists. It has an oversupply of expensive diagnostic equipment, but some regions lack sufficient primary care services. More direct control over both sup-

Exhibit 32

NEAR-TERM STEPS THAT JAPAN CAN TAKE TO GET HEALTH SYSTEM REFORM GOING

- Let top physicians conduct a national review to establish clear improvement targets (as the UK has done)
- Set up one or more independent regulators that can act as forcing devices, free from political influence (e.g., the quality regulators in Germany and the UK)
- Empower other stakeholders and provide incentives for them to push reform in the right direction (as Germany's statutory payors have done)
- Combine deep structural reform with short-term operational improvements that make reform more easily acceptable (e.g., Toyono's improvements to emergency care)
- Conduct well-selected, strategic regional pilots
- As much as possible, link financial incentives systematically to results rather than activities (as Germany and the UK have done)
- Overinvest in communications with the public and other stakeholders, using professional support (as Canada and the UK have done)

Source: McKinsey analysis

ply and demand is needed if Japan is to reform its health system. The health system's incentives (especially its financial incentives) must be changed so that they discourage overutilization, and the country must find ways to avoid—or at least limit—the inappropriate use of medical resources.

The second issue is the system's lack of quality controls. Accreditation standards are weak, the system is too fragmented to permit easy dissemination of best practices, and the incentives that have been put in place to improve care quality are too small to effect change. Stronger controls must be established to ensure the quality of care delivered.

The third issue is the lack of value-based cost controls. Japan, like other developed countries around the world, must find ways to control its health care spending, but in doing so, it would benefit by taking both the quality and cost-efficiency of care into consideration. In addition, it should consider adopting the more nuanced approaches to reimbursement that other countries are using.

Overcoming key obstacles

If Japan wants to ensure the sustainability of its health system, then health care reform must become one of the government's primary policy goals. At present,

responsibility for the health system is split among multiple agencies, and too often discussions focus only on short-term, individual policy measures, not on long-term strategic planning. Furthermore, the ongoing devolution of responsibility for health care to local governments is unlikely to produce the kinds of substantive changes that the health system needs. Japan would be much better served if it took a more coordinated approach.

Responsibility for developing and implementing the country's health care agenda should be given to a small set of policymakers (including the physicians leading the national review), who are also given the authority to make substantive changes. The policymakers must be willing to ask hard questions and to intervene forcefully to ensure that the necessary changes are made. Some of these changes are likely to be politically unpopular, and the policymakers must be willing to take the heat. They must also be held accountable for their decisions and actions.

One of the first changes the policymakers should consider is the establishment of one or more independent agencies to regulate the health system and ensure its quality. The agencies would serve a role analogous to that played by the central banks in many countries or the independent regulators that oversee utilities. For example, Japan might benefit from having an institute to collect and analyze data on care quality and cost, as well as an organization that oversees stricter accreditation standards for physicians. Because these agencies would be free of political influence, they would be able to act as forcing devices to ensure that the necessary reforms are made. Both Germany and the UK have used this approach with success.

The cost of health care is obviously a factor that policymakers will have to address, but it should not be the primary factor considered. Instead, the policymakers should develop a vision for what the country's health system should look like in five or ten years so that it can make balanced choices about the quality of care delivered, the supply of services, and the system's costs.

Agreeing on principles and goals

The vision the policymakers develop for the future health system should include overarching principles, as well as specific goals that translate those principles into concrete actions (Exhibit 33). By using this approach, the policymakers can focus on what the health system should achieve, not merely what it should look like.

The policymakers could, for example, decide that one principle for the future health system is that it should deliver medical care at a consistently high level, on par with the best care received globally. They could then establish multiple supporting goals. For example, to help ensure that medical resources are used appropriately, the policymakers could require that patient consultations occur only as often as is medically necessary; that the roles of primary care physicians, specialty clinics, and hospitals be clearly separated; and that all patients be treated in the most appropriate place for their conditions.

Some goals could be used to support more than one principle. For example, the policymakers could decide that the future system should include financial incentives to encourage providers to achieve the best possible treatment outcomes. This approach would improve the system's cost-effectiveness as well as its quality of care. Both of these principles could also be supported by granting payors greater authority and forcing providers to give them more detailed outcomes data. For example, payors could alter their reimbursement formulas to encourage greater cost-effectiveness and care quality; they could also use the outcomes data to rank providers on the quality of care delivered. Payors could also be allowed to compete with each other (as German payors have since 1997); this would give them a strong incentive to use such data to get the best possible care for the lowest cost.

Identifying potential reforms

Once policymakers have established the principles and goals of Japan's future health system, they will have to compare that vision and the current system to determine what reforms are necessary. It is important that they not jump into this step without having first reached agreement on principle and goals. When considering whether certain reforms are achievable, the policymakers should carefully examine the changes that have already been implemented in some parts of Japan to identify those that have been working well.

For example, the town of Toyono in Osaka Prefecture recently implemented a new program to reduce the number of children treated in its emergency rooms by its overworked specialists. The program includes three innovations: a telephone consultation service staffed by physicians and nurses that parents can call when their children are sick, a public education campaign to teach parents to call for consultations before bringing sick children to the emergency room, and a group of pediatricians who provide primary care services in the emergency

Exhibit 33

EXAMPLES OF THE GOALS THAT COULD BE ESTABLISHED TO SUPPORT JAPAN'S VISION FOR HEALTH SYSTEM REFORM

Appropriate use of medical care	<ul style="list-style-type: none">• Patient consultations are sufficiently long to allow sound diagnosis and treatment• Patient consultations occur only as often as needed to balance treatment needs against patient convenience and cost• Patients are hospitalized for only as long as is essential to achieve the best treatment outcomes• The roles of general practitioners, specialty clinics, and hospitals are clearly defined and differentiated• Patients receive the most appropriate care for their ailment in the most appropriate place of treatment or are referred to the most appropriate place of treatment
Appropriate provision and allocation of medical resources	<ul style="list-style-type: none">• Medical services are offered at the volume and type needed to meet medical needs• The available opportunities for medical practice are fully based on medical need, and financial incentives fully reflect medical need• Physicians receive support from qualified ancillary health professionals for treatments that do not have to be delivered exclusively by fully trained physicians
Availability of high-quality care	<ul style="list-style-type: none">• All patients are provided with the best possible medical care• The latest medical technologies and treatment practices are being utilized broadly across Japan
Infrastructure optimized for quality	<ul style="list-style-type: none">• Medical institutions are sufficiently concentrated to enable physicians to develop and maintain a high level of expertise in the treatments they deliver• Diagnostic procedures and treatments requiring specialized knowledge are provided only by those who have sufficient training in those procedures and treatments
Assurance of adequate treatment quality	<ul style="list-style-type: none">• All providers of specialized care can demonstrate that they are qualified to offer that care and achieve good outcomes• Accreditation and treatment outcomes are monitored by a truly independent authority, which then judges the quality of care delivered based on objective inputs and outcomes data• Patients are provided with sufficient information to educate them about the quality of care they are receiving at the institution of their choice
Cost effectiveness	<ul style="list-style-type: none">• Providers are given incentives to achieve the best possible treatment outcomes• Providers are given incentives to offer only the most cost-effective types of treatment in appropriate volumes• Only treatments deemed sufficiently effective are reimbursed
Cost efficiency	<ul style="list-style-type: none">• Medical care is provided only by institutions with sufficient scale to reap significant economies of scale• Payors can vet reimbursement on a case-by-case basis and reject unreasonable submissions• Prices and fee levels for diagnostic tests and treatments are based on a thorough assessment of their value and cost of provision• Cost-control measures are highly selective and aimed at eliminating inefficiencies and ineffective care

room at night and on holidays (when the telephone consultation service is not available). As a result of these changes, the number of children being treated by specialists in the emergency room has dropped by 80 percent; the specialists now have time to concentrate on the severely ill children who truly need their attention, and their lifestyle has improved as the number of hours they are forced to work has decreased. Similar programs have been successfully implemented in Okazaki (Aichi Prefecture) and Kanoya (Kagoshima Prefecture).

However, Japan should also consider conducting pilot programs on a more systematic, strategic basis. The pilots could be organized regionally, perhaps with support from the national government. However, a central organization would oversee the pilots, monitor their success, and ensure that successful programs are rolled out across the country.

Japan also has the opportunity to learn from the experiences of other developed countries to identify successful health system reforms. Switzerland, for instance, provides a useful example of how a country can cope with an excess number of hospitals. In 1990, the Canton of Vaud had 17 general hospitals. One small area (Montreux-Vevey) alone had three general hospitals for fewer than 100,000 people (Exhibit 34), and none of these hospitals was large enough to operate efficiently. The canton therefore decided to change the mission of many of its hospitals so that each specialized in a different area. In Montreux-Vevey, for example, one hospital now focuses on nonsurgical care (primarily internal medicine, pediatrics, and obstetrics). A second concentrates on acute surgical care (for example, neurosurgery, urology, and trauma). The third provides both acute and long-term (rehabilitative or palliative) care for cancer and orthopedic patients. Between 1990 and 2005, the Canton of Vaud changed the mission of ten of its hospitals; an additional seven were either closed or turned into rehabilitation centers. Only one general hospital remains. As a result of these changes, the canton had 29 percent fewer hospital beds in 2005 than it did in 1990.

London provides an instructive example of how one region dealt with concerns about the quality of care its hospitals were delivering. The city realized that it had an excess number of small, subscale hospitals and so decided to change the focus of many of them to improve the quality and cost-efficiency of the care delivered. It is now in the process of implementing the changes. Soon, London will have the five different types of facilities listed in Exhibit 35.

France and the US have especially strict systems for educating and training physicians, and thus they could serve as useful role models if Japan wanted to strengthen its accreditation processes. In both countries, there is a clear delineation between the training required for primary care and the specialties; all candidates must undergo repeated, rigorous examinations before they are licensed for practice; and there are independent organizations to ensure that standards remain high.

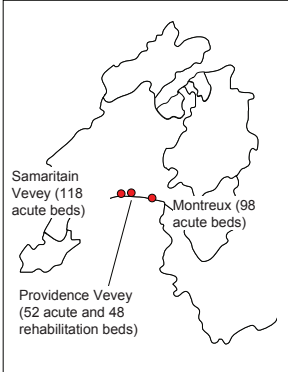
The US also provides a good illustration of how allied health professionals can be used to alleviate the workload of physicians. Certain nurses with advanced training, for example, are allowed to examine patients, make diagnoses, and even administer some forms of treatment. Because these nurse practitioners are able to take care of many routine patients, US physicians can concentrate on more complex cases.

Exhibit 34

HOW THREE GENERAL HOSPITALS IN SWITZERLAND WERE GIVEN A CLEAR DIVISION OF ROLES

Montreux-Vevey area, Vaud; 2005

Montreux-Vevey area: 85,000 inhabitants



	Samaritain Vevey	Providence Vevey	Montreux
Beds			
Acute beds	118	52	98
Rehab beds		48	
Specialization			
Internal medicine	✓		
Pediatrics	✓		
OB/GYN	✓		
ORL	✓		
Orthopedics		✓	
Plastic		✓	
Oncology		✓	
Surgery			✓
Trauma			✓
Urology			✓
Neurosurgery			✓
Ophthalmology			✓
Emergency: nonsurgical			
Emergency: surgical	✓		
Rehabilitation		✓	✓
Palliative care		✓	

Source: Hôpital Riviera, Département de la santé et de l'action sociale, Vaud

Exhibit 35

LONDON HAS REORGANIZED ITS PROVIDERS INTO FIVE TYPES OF INSTITUTIONS

	Description	Supposed number of beds	24/7 service
A Specialist hospitals	• Highly specialized and focused on delivering leading-edge complex services; also act as research institutions	100–200	✗
B Major acute hospitals	• Provide full range of complex services, including emergency medicine	500–1,000	✓
C Elective centers	• Focus on specific types of activity, excluding emergency work, to be more productive and produce better clinical outcomes	100–200	✗
D Local hospitals	• Provide a wide range of less complex inpatient treatments and outpatient procedures in the local setting	200–400	✓
E Polyclinics	• Provides infrastructure to centralize clinic-based care (e.g., 25 general practitioners) and shift some types of hospital-based care into a more local setting	0	✓

Source: NHS "Healthcare for London"

Developing an implementation plan

The final step that Japan must take if it wants to reform its health system is to develop a plan for ensuring that change is implemented. Our experience suggests that this plan should include some “quick wins”—reforms with proven track records that can be implemented fairly quickly (for example, Toyono’s pediatric emergency care program). These quick wins demonstrate that change is possible and thus increase buy-in for the reforms. However, the implementation plan should not focus only on the quick wins; it should also include a well-thought-through approach for instituting the deep structural reforms that the health system so badly needs.

The implementation plan will fail unless other stakeholders in the system, including the public and private payors, are given the authority—and the incentives—to push reforms in the right direction. For example, regulations governing the insurers could be changed to allow them to benefit financially from successful reforms (the insurers could be permitted to alter their reimbursement formulas to encourage reforms and then to share in any savings achieved).

It is crucial, however, that the financial incentives offered to all stakeholders be geared to specific results, not to specific activities; otherwise, they may fail to achieve the desired impact. In the UK, for example, general practitioners have been given financial incentives to improve the cardiovascular health of their patients. However, the incentives are geared to how well the patients’ blood pressure and cholesterol levels are controlled—not to how often the patients are treated or how many prescriptions they are given.

Japan could also push reforms in the right direction by improving its DPC system—specifically, by broadening its scope to include more disease areas and procedures, making its use mandatory for all hospitals, equalizing the rates paid to all hospitals, and abolishing the extra allowances for length of stay. (The elimination of length-of-stay allowances might require the country to increase the reimbursements for each disease and procedure, however.)

The implementation plan should also include clear outcome goals for all government agencies that play a role in the health system. These goals should be designed to force the agencies both to work together and to take the actions necessary to ensure that the reforms move forward.

Finally, the implementation plan should include a communications strategy—a way to inform the public and all key stakeholders about why reforms are necessary and what those reforms will include. For example, as London is reforming its hospital system, it has set up a Web site that keeps city residents fully informed about the changes taking place. Our experience in Canada and the UK suggests that it is worthwhile to invest heavily in the communications strategy and to engage professional support for it.

* * *

Japan is far from the only developed country that needs to reform its health system to ensure its sustainability; around the world, countries are confronting the challenge of providing their citizens with high-quality health care at an affordable price. Japan can learn from the experience of other countries by identifying reforms that will enable it to guarantee its citizens access to care while avoiding overutilization, to provide high-quality care throughout the entire health system, and to control costs without compromising access or quality.



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