

Japan-U.S. health policy project
Policy Recommendation

日米医療政策プロジェクト 政策提言

Volume 2.

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PAYMENT SYSTEM BE STRENGTHENED?

Lessons from the U.S. Medicare Prospective System

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の強化に向けて
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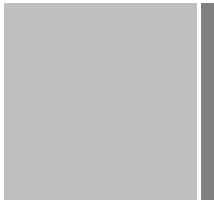
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Contents

FOREWORD	1
BACKGROUND	3
CONCERNS ABOUT THE JAPANESE HOSPITAL PAYMENT SYSTEM	4
BRIEF SUMMARY OF RECOMMENDATIONS	5
DETAILED RECOMMENDATIONS	6
1. EXPAND THE DPC CLASSIFICATION SYSTEM TO INCLUDE ALL HOSPITAL PATIENTS.....	7
2. EXPAND THE DPC PAYMENT SYSTEM TO INCLUDE ALL COSTS.	8
3. IMPLEMENT A PER CASE SYSTEM.....	10
4. END ADJUSTMENT OF PAYMENTS FOR SPECIFIC HOSPITAL BEHAVIOR.....	11
5. EXPAND THE SYSTEM TO INCLUDE OTHER SERVICES.....	13
6. REQUIRE ALL HOSPITAL TO PARTICIPATE.....	14
7. ADJUST FOR TRANSFER OUTLIERS AND SHORT STAYS.	15
8. MONITOR HOSPITAL AND PAYMENT ON AN ONGOING BASIS.....	16
SUMMARY	18
REFERENCES	20

Foreword

The Center for Strategic and International Studies (CSIS) in the United States and the Health and Global Policy Institute (HGPI) of Japan, launched a joint project to create a dialogue on major health care policy issues and solutions in the two nations in early 2011.

In both nations, new health care policies will clearly be necessary to meet citizens' current and future demands for affordable, available and quality health. Greater efficiencies in health care will be essential for each nation to renew and sustain economic growth over the long term.

This dialogue among national experts and senior leaders is based on the opportunities to learn from the overall similarities of the two nation's health care systems. Both the Japanese and the US health care systems have multiple insurers, a fee-for-service based payment system and thousands of independent hospitals and physicians.

The project – for the first time – introduces experts and leaders from Japan and the United States to the similarities of the two nation's health care systems problems and solutions.

The goal of the project is to generate fresh analyses and recommendations in critical areas of health care in Japan and the United States. It provides an opportunity for informed discussion of pragmatic next steps to address priority health care concerns. It aims to generate pragmatic and actionable options in each key policy areas that can increase the efficiency and quality of health care.

This project's initial efforts focused on options for health care policies that addressed the development of healthcare information systems and the design of hospital payment reforms.

The CSIS/HGPI report on hospital payment reforms *How Can Japan's DPC Inpatient Payment System be Strengthened? Lessons from the US Medicare Prospective System* is jointly authored by Gerard Anderson, PhD and Naoki Ikegami, MD, MA. This report provides possible lessons for revisions to the current Japanese hospital payment system to address the very long length of stay, which is four times the OECD average, and other inefficiencies in the Japanese hospital sector from the thirty year experience with Medicare prospective payments to hospitals in the US. Dr. Ikegami, with support from the Commonwealth Fund, is also preparing a report on the lessons from the effectiveness of Japan's price based hospital payment system for the US. Dr.

Anderson is Professor of Health Policy and Management at Johns Hopkins Bloomberg School of Public Health and Dr. Ikegami is Professor and Chair of the Department of Health Policy and Management at Keio University.

After the Japan-US Health Policy Dialogue was initiated by CSIS and HGPI in January of 2011, the Tohoku earthquake-tsunami-and radiation disaster occurred on March 11. It has now been agreed by CSIS and HGPI that the next phase of the Japan-U.S. Health Policy Dialogue will shift the project's focus to collaborative US-Japan efforts to the respond to the health implications of the disaster.

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HOW CAN JAPAN'S DPC INPATIENT HOSPITAL PAYMENT SYSTEM BE STRENGTHENED?

Lessons from the U.S. Medicare Prospective System

Gerard Anderson and Naoki Ikegami

Background

Japan implemented an inpatient prospective payment system for hospitals in 2003, while the United States implemented an inpatient prospective hospital payment system for the Medicare program 20 years earlier in 1983.

Japan introduced the prospective payment system when there was limited growth in the overall economy; overall tax revenues were stagnant; and spending for health care was increasing very slowly. During this period, Japan already had the highest percentage of adults over age 65 among all industrialized countries and was therefore responding to the costs associated with caring for an older population. While Japan had been successful in controlling health spending over the previous 30 years, a new approach was needed to allow hospital spending to remain under control especially as Japan was adding new services to respond to an aging population.

The Japanese system for acute inpatient care was implemented in April 2003. Known as the Diagnostic Procedure Combination (DPC) payment system, it was designed by health service researchers, with input from 21 specialty associations. Data from the 82 premier hospitals, the "special function hospitals," were used to test the classification system and to set the payment rate.

The United States introduced the Medicare Prospective Payment System (PPS) in 1983. The PPS is based on Diagnosis Related Groups (DRGs) and was designed primarily to control health care spending in the Medicare program and to reduce the variation in the level of health spending and length of stay across hospitals. All hospitals were required to participate in the Medicare PPS if they met certain criterion. The system was designed by the federal government with input from health service researchers at Yale University. A similar system had previously been developed and implemented in the state of New Jersey.

There are a number of similarities in how the two systems work. In both countries:

1. The hospital sector represents the largest component of health spending—50 percent in Japan of which 35 percent is inpatient care, and 30 percent in the United States—and so it makes sense to begin any concerns about controlling health spending with the hospital sector, especially for inpatient care;
2. There are thousands of independent hospitals;
3. There are hundreds of insurers that pay hospitals, although in Japan all insurers pay the same rate, while in the United States, Medicare pays with the PPS and other insurers set their own rates with hospitals;
4. Payers rely on a fee-for-service system to pay hospitals; and
5. Hospital payment systems were revised because of concerns about the length of stay at some hospitals and to make sure that hospitals achieved both technical and allocative efficiency.

The purpose of this issue brief is to assist Japan in examining the current state of its inpatient hospital payment system. The U.S. Medicare PPS hospital payment system has been operational 20 years longer than the Japanese DPC system and has introduced many adaptations to respond to hospital behavior. The United States has an established health economics and health services research infrastructure that allows for analysis of many different components of the prospective payment system. In the United States, each component of the hospital payment system has been carefully analyzed.

Concerns about the Japanese Hospital Payment System

A number of international agencies and consulting firms have analyzed the Japanese health care system. Many of the evaluations have praised the overall low costs and the excellent outcomes of the system. However, the Organization for Economic Cooperation and Development (OECD), the European Observatory, and the McKinsey consulting firm have all pointed out that the hospital payment system needs to be reevaluated at this time. Each has expressed concerns about the performance of the hospital sector and the incentives created by the Japanese hospital payment system.

When the Japanese DPC system was introduced, there were many compromises that needed to be made. Payers desired a case mix adjusted approach, while hospitals wanted to retain a fee-for-service-based system. It was recognized that care was not standardized and that there were large variations in the length of stay across hospitals. For a variety of reasons, it was

necessary to design the payment system within one year. As a result, it was necessary to make a series of compromises.

These compromises included the fact that the DPC classification system was developed by clinicians in each specialty. As a result, many DPC categories did not have a sufficient number of cases or had large variation in costs. Only some costs were included in the new payment system, while others remained under fee-for-service. Payments in the DPC system are set on a per diem and not per case basis. Specific conversion factors were added to make up some of the difference between what hospitals would have been paid under fee-for-service and what they would be paid under DPC. The new system was introduced in a relatively small number of hospitals.

It is now time to reevaluate some of these compromises. Some of them may cause hospitals to be less efficient or to have higher costs or longer lengths of stay than is necessary. The recent problems in northeast Japan make it increasingly imperative for the Japanese hospital system to be as efficient as possible.

In Japan, there are currently a number of concerns about the DPC acute hospital payment system. These include:

1. The hospital-specific conversion factor that adjusts payments made by the DPC system;
2. The significant proportion of payments that are made outside of the DPC system;
3. The number of cases that are paid outside of the DPC system;
4. The per day payment system;
5. Specific adjustments based on hospital behavior; and
6. The auditing mechanisms.

Brief Summary of Recommendations

There are four major and five technical specific changes that the Japanese government should consider as it continues to reform its hospital payment system.

If adopted, the combined effect of all these changes would be to expand the prospective and bundled approach to payment for hospital care to all patients at all hospitals. All expenditures would be covered by the DPC system, and payment would be on a per case basis. The hospital-specific adjustments that encourage inefficiencies in the production of hospital care

would be eliminated.

Without additional data it is impossible to estimate the savings or the improvement in technical and allocative efficiency that would result from these changes. However, we believe it would be significant.

The four most important of these changes would:

1. Phase out all of the currently remaining components of the prior hospital payment system instead of keeping them indefinitely;
2. Incorporate all hospital costs into the DPC payment instead of having one-third of the costs still being paid fee-for-service;
3. Apply the DPC payment system to all inpatient care instead of having approximately 40 percent of all DPC categories, and 10 percent of the inpatients, continue to be paid outside of the DPC system; and
4. Move from the current per day to a per case, or per patient stay, hospital payment system.

There are also a five technical issues in the hospital payments system that Japan should consider. These would:

1. Eliminate the additional payments for higher nurse staffing levels and for performing certain activities and instead make additional payments based on demonstrated better clinical outcomes;
2. Audit hospitals based on their overall case-mix profile instead of individual claims;
3. Analyze how DPC composition differs among the hospitals across prefectures;
4. Expand the DPC system to services beyond inpatient services; and
5. Require all hospitals to meet minimum quality standards for acute care and require all hospitals to participate in the DPC system.

Detailed Recommendations

Japan began its DPC system in 2003 after a planning period of only one year. It is important for Japan to reevaluate its hospital payment program periodically. This reevaluation could use the perspective of the U.S. DRG system to evaluate the performance and incentives of the DPC system in Japan.

While it is difficult without additional data to estimate the precise impact that the proposed changes would have on the current system, we believe that the changes would improve technical and allocative efficiency and could result in lower hospital spending.

If adopted, the combined effect of these recommended changes would be to expand the system to cover all patients at all hospitals. All expenditures would be covered by the DPC system and payment would be on a per case basis. The hospital-specific adjustments would be eliminated and technical and allocative efficiency would increase.

Eight specific changes to the current DPC hospital payment system are recommended for consideration.

1. Expand the DPC classification system to include all hospital patients.

The current Japanese classification system categorizes patients into approximately 2,700 DPC groups. However, only approximately 1,900 are actually used for payment purposes.

The remaining 800 DPC groups are judged to be too small (with less than 20 patients) or too variable (as the coefficient of variation in either the fee-for-service amount or the length of stay is greater than one) for rates to be set. Patients coded into these 800 groups continue to be paid fee-for-service. While this number has decreased somewhat, it remains high because revisions on groupings are made on a clinical, and not on a cost, basis.

In the United States, the patient's condition is measured using Medicare severity diagnosis related groups (MS-DRGs). Clinical conditions are defined by both the patients' discharge diagnoses, including the principal diagnosis—the main reason the Medicare beneficiary needs inpatient care—and up to eight secondary diagnoses indicating other conditions that were present at admission (comorbidities) or developed during the hospital stay (complications). The treatment strategy—surgical or medical—is defined by the presence or absence of up to six procedures performed during the stay.

The U.S. MS-DRG system has 335 base DRGs, most of which are then split into 2 or 3 MS-DRGs based on the presence of either a comorbidity or complication (CC) or major CC. Discharge destination and use of a specific drug are occasionally used along with principal diagnosis and procedures in structuring base DRGs.

MS-DRGs group all Medicare patients with similar clinical problems into groups that are

expected to use similar amounts of hospital resources. There are 746 different clinical categories in the current version, but the number changes almost annually. Unlike Japan, all patients are assigned to one of the 746 different MS-DRGs and are paid on the basis of the specific DRG.

The U.S. Medicare program annually reviews the MS-DRG definitions to ensure that each group continues to include cases with clinically similar conditions requiring comparable amounts of inpatient resources. When the review shows that subsets of clinically similar cases within an MS-DRG consume significantly different amounts of resources, the Centers for Medicare and Medicaid Services (CMS) often reassigns them to a different MS-DRG with comparable resource use or creates a new MS-DRG.

A key difference between the U.S. Medicare and Japanese classification system is that the Medicare program classifies all inpatients into one of the MS-DRGs and pays the hospital based on the MS-DRG category. In Japan, not all cases are grouped into categories that are used for payment purposes. Approximately 800 out of 2,700 DPC categories are not paid under the DPC system.

Recommendation: Japan should consider revising the DPC groups to provide that all patients are included in a DPC group of sufficient size and with limited variability.

In order to accomplish this change, the concept of the DPC would need to change from a system focused only on clinical process classification to a combination of clinical processes and cost homogeneity.

The U.S. Medicare program has been able to accomplish this as have hospital payment systems in other nations.

2. Expand the DPC payment system to include all costs.

In Japan, surgical operations, endoscopic examinations, rehabilitation therapy, devices, and drugs given on the day of the surgical operation are excluded from the DPC payment system. As a result, about one-third of the total hospital inpatient revenue is paid based on fee-for-service.

There is less control over the volume of the services paid fee-for-service. Without additional data, it is not possible to know if the volume of fee-for-service spending is increasing; however, theory would suggest that it will increase faster than DPC payments. There are financial incentives for hospitals to allocate more costs to the services paid outside of the DPC system. This undermines

the incentives of hospitals to control spending by increasing incentives to provide the services paid on a fee-for-service basis and interferes with both allocative and technical efficiency.

The rate of increase in the fee-for-service component of hospital spending and utilization needs to be monitored. Japan should begin to compare the rate of increase in fee-for-service spending and volume of fee-for-service to the spending and volume in the DPC system.

In the United States, over 3,500 hospitals contract with the Medicare program to provide acute inpatient care, and they agree to accept the MS-DRG rates as payment in full. The MS-DRG payment rates are intended to cover all the costs that efficient providers would incur in furnishing high-quality care.

The costs of each hospital in the United States are recorded in an elaborate set of forms known as a Medicare cost report. Operating payments cover labor and supply costs; capital payments cover costs for depreciation, interest, rent, and property-related insurance and taxes. Medicare assigns a weight to each MS-DRG reflecting the national average relative cost of caring for beneficiaries in that group compared to the average Medicare case. Medicare recalibrates the MS-DRG weights every year based on standardized costs for all Prospective Payment System (PPS) cases in each MS-DRG. All costs, excluding physician services, are covered in the MS-DRG payment.

In very few instances, hospitals in the United States may receive additional payments for new technologies. Medicare evaluates applications by technology firms and others for add-on payments based on criteria of newness and clinical benefit. New technology payments are additional to the MS-DRG payment and thus are not budget neutral.

In order to adjust for cost-of-living differences, Medicare's base operating and capital rates are adjusted by an area wage index to reflect the expected differences in local market prices for labor. The wage index compares the average hourly wage for hospital workers in each locality to the nationwide average. The wage index is revised each year based on wage data reported by hospitals.

Medicare's payments are derived through a series of adjustments applied to operating and capital base payment rates. The base rates are updated annually, and absent other policy changes, payment rates for all MS-DRGs are increased at the same rate. Payments are for the entire admission and, except in special and infrequent circumstances when outlier payments are

made, do not vary by the actual length of stay for the specific patient.

Medicare sets per discharge base rates using data on the operating and capital costs that efficient facilities incur in furnishing covered inpatient services.

Recommendation: Japan should consider incorporating all hospital expenses into the DPC payment system.

3. Implement a per case system.

The U.S. Medicare rate is a per case rate. Each patient is paid the same amount regardless of how long the person remains in the hospital. There are outlier payments for the few patients that stay in the hospital a very long time or who are very expensive.

In contrast, the Japanese system is a very complicated per day system with the rate declining as the length of stay (LOS) extends. The daily rate for each DPC group is multiplied by the number of days the person is hospitalized. The DPC rate per day gradually decreases as the length of stay increases. The hospital stay is divided into four payment periods. The cut-off days are unique to each DPC and are recalculated every two years based on data submitted by the DPC hospitals.

The Japanese formula is:

- LOS I: Up until the day when the 25th percentile patient from the shortest was discharged in that DPC
- LOS II: Up until day when the 50th percentile patient was discharged
- LOS III: Up until the day that is twice the standard deviation of the LOS
- Special LOS: From the day after LOS III

If the patient's stay extends to Special LOS, the amount would be the following:

Σ (Rate of LOS I) X (Number of days in LOS I) + (Rate of LOS II) X (Number of days in LOS II)
+ (Rate of LOS III) X (Number of days in LOS III) + (Special LOS = Payment by fee-for-service [FFS])

The extent to which the DPC has contained costs at the macro level is difficult to evaluate.

The average LOS for all acute beds has declined from 20.7 days in 2003 to 18.8 days in 2008, but the number of new admissions has increased by 2.4 percent (Japan MHLW, 2005, 2010b).

Recommendation: Japan should consider using a per case payment system. This new system would shorten the average length of stay and provide financial incentives for hospitals to manage the care of the patient from the first day.

4. End adjustment of payments for specific hospital behavior.

The U.S. Medicare system adjusts for differences in the input costs across geographic regions and for the number of residents per bed and the number of uninsured patients the hospital sees. None of these adjustments is based on hospital behavior.

Japan allows hospital behavior to partially determine the payment rate. Allowing hospital-specific behavior to influence the total payment can lead to perverse incentives. Hospitals have a financial incentive to increase spending in those areas that are paid fee-for-service and to lower spending in those areas that are paid under a set rate.

In Japan, one set of adjustments is designed to promote better quality of care. The most significant is the nurse staffing level. Depending on the level of nurse staffing, the payment rate for an individual hospital can be increased by as much as 17 percent. Other factors designed to improve quality of care that have hospital-specific adjustments in Japan include meeting medical records standards and safety standards.

A second set of adjustments uses the payment under the old and new system to determine the rate the hospital will be paid. When the DPC system was first introduced, it established a formula based on the ratio of the aggregated amount that the hospital had been paid by FFS and the aggregated amount that would be paid by DPC, in the months before the hospital had opted for DPC. This factor ranged from 1.3263 to 0.8770 in 2010.

This is similar to the system the U.S. Medicare DRG program used in the beginning, but the Medicare program gradually phased out the old system, and the U.S. DRG system now relies totally on DRG-based payments to hospitals.

In 2010, Japan introduced a revision in order to gradually replace the hospital adjuster coefficient by compensating hospitals that had treated heavy care patients and provided high-tech care. This has been interpreted as a way to reward hospitals for specific types of behavior.

The specific types of behavior that policies in the DPC system seek to promote include:

- *Timely and appropriate coding of the DPC coefficient.* If the hospital is late in submitting the prescribed clinical data and/or if the proportion of patients classified in the “unspecified” category exceeds 40 percent, the payment is reduced.
- *Shorter length of stay.* An adjuster, indexed to the hospital's average length of stay after adjusting for the hospital's case mix, provides for payment rates to be increased if the average length of stay is shorter than predicted.
- *Higher complexity.* A coefficient, indexed to the hospital's case-mix composition, provides higher payments if the proportion of DPC groups with high per diem rates is greater.
- *Broader coverage.* A coefficient provides increased payments if the hospital provides a wider range of DPC groups.
- *Contribution to regional health plan.* Higher payments are provided by a coefficient that is indexed to the hospital's listing as a regional hub hospital in each of the following areas: stroke, cancer, emergency care, perinatal care, and care for remote areas.
- *Emergency room (ER).* A coefficient, indexed to the difference between the FFS equivalent amount and DPC rate in the first two days of hospitalization for all patients and ER patients, provides higher payments if the difference is greater in order to compensate and incentivize hospitals to admit ER patients who, unlike scheduled admissions, would have to undergo diagnostic testing after hospitalization.

The U.S. Medicare system does not adjust for differences in nurse staffing ratios, medical records standards, or safety standards. The philosophy in the Medicare program is that if hospitals believe that these types of structure and process measures (nurse staffing ratios, etc.) result in better quality of care or lower overall costs then the hospitals should have the flexibility to make their own decisions.

The Medicare program has recently begun to develop pay-for-performance systems that reward hospitals with better clinical processes and outcomes.

Both the U.S. and Japanese systems were phased in. However, unlike the U.S. Medicare system, the Japanese system has not established an end to the phase-in period. Japan should set a fixed date for ending the old fee-for-service system.

Japan has established a set of payment incentives designed to promote specific types of behavior. The U.S. Medicare philosophy is different. Instead of trying to provide incentives for hospitals to do certain things, the U.S. Medicare program has begun to provide incentives for better clinical outcomes. The Medicare program focuses on outcomes, while the Japanese system focuses on structure and process indicators.

Japan should now begin to focus more on clinical outcomes than on specific types of hospital behavior.

Recommendation: Japan should consider dropping payments for performing certain structural and process activities and instead pay based on clinical processes and outcomes. Japan should consider eliminating all payments based on factors in the old fee-for-service payment system.

5. Expand the system to include other services.

Since 1983, the United States has designed and implemented Prospective Payment Systems for most other institutional services covered by the Medicare program, including outpatient hospital services, long-term care services, and home health services.

One area that showed significant increases following the introduction of Medicare PPS was post-hospital transfers to sub-acute care (Morrissey, Sloan, and Valvona, 1988).

Following the introduction of the Medicare PPS system, patients were discharged earlier from acute care hospitals and were transferred to other facilities. This became known as being “discharged sicker and quicker.”

In nearly all DRGs, the probability of being transferred to a skilled nursing facility, intermediate care facility, or home health agency increased following the introduction of the PPS. This was particularly true for patients with stroke, pneumonia, and major joint and hip procedures. In response, the Medicare program began to increase payments to these other facilities and agencies to stimulate their growth.

After a relatively short period, the policy was changed and payment rates to these post-acute services were reduced as the opposite concern of too many services being provided was reached.

Japan needs to consider what will happen to patients as they are being discharged earlier from

acute care hospitals and whether there are enough post-acute care facilities and services to accommodate these patients. Japan has not introduced prospective payment for outpatient hospital services or other institutional services.

Recommendation: Japan should consider adopting prospective payment systems to include other components of the health care system in addition to inpatient hospital services.

6. Require all hospital to participate

In the U.S. Medicare program, some smaller and specialty hospitals are paid under a different payment system. For example, over 1,300 rural hospitals qualify as critical access hospitals and are paid on a cost basis (incurred costs plus 1 percent) instead of under the DRG system. However, if a hospital is not in one of these specifically excluded categories, then it is required to participate in the MS-DRG system. Individual hospitals do not get the opportunity to choose to participate or not in the Medicare DRG system.

In Japan, some hospitals remain outside of the DPC program because they cannot meet certain quality standards, like nurse staffing ratios, that are required for a hospital to participate in the DPC program.

Giving the hospitals a choice leads to an obvious question: what is the incentive for hospitals to choose to be paid under the DPC system? One incentive is prestige; it means that a hospital will be recognized as an acute care hospital by other providers in the community and boost morale among its staff. The fact that the original DPC hospitals were the premier hospitals in Japan gave the impression that the elite hospitals were paid under DPCs.

In Japan, there are financial incentives for hospitals to be paid under DPCs. For example, in Japan the hospital retains any efficiency savings made by reducing diagnostic tests and drugs because its hospital-specific conversion coefficient will continue to reflect the service pattern that existed before the adoption of the DPC-based payment.

The use of brand drugs has traditionally been high in Japan. The savings will be particularly large if drugs are switched from brands to generics. The hospital may also be able to increase the proportion of patients in the DPC codes that have higher rates.

As of April 2011, one-fifth of all general hospitals in Japan are paid under the DPC system. Because these tend to be the larger hospitals, just over half (51.7 percent) of all hospital beds

are paid under the DPC system.

In contrast, in the United States all large community hospitals and all academic medical center hospitals must participate in the Medicare DRG payment program. Hospitals do not have a choice of participating in the DRG program.

Allowing hospitals to choose to participate in the DPC system allows the most inefficient hospitals to remain on the old system.

Recommendation: Japan should consider mandatory enrollment in the DPC system by first requiring all hospitals to meet the minimum quality standards necessary to participate in the DPC program. Once all hospitals meet the quality standards, they could then be required to participate in the DPC program.

7. Adjust for transfer outliers and short stays.

In the U.S. Medicare MS-DRG system, rates are reduced for certain transfer cases. The objective is to encourage transfers when it is clinically appropriate, such as a transfer to a rehabilitation facility.

The Medicare DRG system also recognizes that some patients will remain in the hospital a much longer time than other patients in the same MS-DRG or be much more costly than other patients in the same MS-DRG. In this case, outlier payments are made in about 3 percent of all discharges.

Japan has not introduced transfer or outlier policies. The complicated length-of-stay adjustment in Japan partially adjusts for outliers, but if the payment system is transformed into a per case payment system then it will be necessary to have an outlier policy.

Facing fixed PPS rates, providers have financial incentives to reduce their inpatient costs by moving some services to another setting.

The U.S. Medicare system has adopted policies to counter these incentives. Thus, related outpatient department services delivered in the three days before admission are included in the payment for the inpatient stay and may not be separately billed (the 72-hour rule). The Medicare program is also considering expanding the time frame beyond 72 hours, as some hospitals have responded by scheduling preoperative testing four days before admission.

The larger issue under discussion is how to more appropriately bundle services to reflect all the pre-admission and post-admission care. This issue is under review in the United States at the present time.

Similarly, payment is reduced when patients have a short length of stay and are transferred to another acute care hospital or, in many MS-DRGs, when patients are discharged to post-acute care settings. These payment incentives were developed in response to hospital behavior.

Recommendation: Japan should consider adding transfer, outlier, and short-stay payment policies to its hospital payment system.

8. Monitor hospital and payment on an ongoing basis.

Japan and the United States have had different reasons for developing their systems in different ways and this has resulted in different choices in a number of areas.

The U.S. Medicare program was primarily interested in controlling the rate of increase in hospital spending in the Medicare program and reducing the variation in the length of stay and the cost per discharge across the hospitals in the Medicare program. The prior system of cost-based reimbursement used by the Medicare program, which paid each hospital its own costs, did not provide any incentives for hospital cost containment.

Japan has used a fee schedule to pay hospitals for many years. In Japan, payers believed that fee-for-service was intrinsically inflationary, despite the fact that the existing system had been able to control spending relatively well.

Japan needed to gather data in order to establish the payment system. Unlike the U.S. Medicare program that already had cost data from the Medicare Cost Report submitted annually by each hospital, the rates in Japan were based on the amount that these hospitals had been reimbursed under fee-for-service.

The Japanese system covers inpatient physician services, as well as hospital services. Virtually all physicians in Japan are salaried employees of hospitals.

While the Medicare program already had sufficient data to set the payment rates using the Medicare cost reports and the existing claims data, the developers of the DPC did not have any

cost data, except the amount billed under fee-for-service, and were primarily focused on collecting data to analyze the hospital's clinical activities.

Although the Japanese claims form listed all the services billed in detail, the clinical information available was restricted to the diagnosis, which was not necessarily standardized. Hospitals that opted for DPC-based payment are mandated to submit detailed electronic data, not only on the services provided to the same detail as in fee-for-service, but also on patient characteristics, such as the staging of cancer and so forth. Acquiring clinical data was a major impetus for creating the Japanese DPC system.

As anticipated, the average length of stay in the hospitals opting to be paid by DPC has declined. This is in spite of the per diem payment systems. In the original 82 hospitals, the average length of stay (ALOS) has shortened from 21.22 days in 2002 to 16.15 days in 2008. In the hospitals that had opted for DPC in 2006, ALOS has decreased from 15.5 days in 2004 to 14.4 days in 2009 (Japan MHLW, 2010a).

One downside of opting for DPC was that, with the decrease in the average LOS, many hospitals have experienced declines in bed occupancy rates. Although this might not necessarily lead to decreases in their revenue, because of increases in the per diem amounts for each patient, it has nevertheless been of major concern to hospital administrators.

In order to secure a steady stream of admissions, hospitals have stepped up their efforts to market their services to the physicians in clinics so as to increase referrals. At the same time, some tertiary hospitals have stopped referring their less complex cases to secondary hospitals. Whether physicians have lowered their clinical criteria for admitting patients and/or for conducting surgical operations has not been researched.

As the length of stay continues to decline, the Japanese government should consider what the alternatives to inpatient services are and whether these alternatives should be promoted.

In the United States, the health care system was not prepared for the reduction in length of stay and the influx of patients into skilled nursing homes, rehabilitation facilities, home health agencies, etc. A series of adjustments over a number of years was necessary to accommodate the increase in post-discharge care.

Japan should monitor the need for additional post-discharge care. In the U.S. Medicare program,

the 30-day readmission rate has remained steady at 20 percent for the past 25 years. This rate is readmission to all hospitals—not just readmission to the same hospital. There are now attempts to lower the readmission rate by using financial incentives.

In Japan, the readmission rate to the same hospital increased from 13.0 percent in 2006 to 13.9 percent in 2009 for the original 82 hospitals, and in the hospitals adopting DPC in 2006, from 16.2 percent to 17.0 percent, during the same time period (Japan MHLW, 2010a).

The Japanese government summoned the chief executive officers of hospitals that had high readmission rates to have them explain the increase. They indicated that it was due to the large number of cancer patients who had to be readmitted for chemotherapy and/or radiation therapy. In response, two changes were made in the 2006 tariff revision.

The first was not to reset the LOS periods if the patient were to be readmitted within three days of discharge: the LOS period would continue to be counted from the date of the first admission. The second was to shorten the LOS I period and increase its per diem rate (while expanding the LOS II period and decreasing its per diem rate) for cancer chemotherapy DPC groups so that hospitals discharging early would be better able to recoup their costs.

Thus, although DPC-based payment may have made care more efficient at the hospitals participating in the program, overall costs have increased at the national level, despite the budget neutral way of setting the DPC rate. This may be because not all hospitals participate, resulting in increases in admissions and shifts to outpatient care, which is paid on a fee-for-service basis. It should also be noted that while the number of diagnostic examinations made during hospitalization may have declined, this may only have shifted costs to outpatient care.

Recommendation: Japan should consider changing to a payment system focused on entire hospitals rather than individual claims. This system would include monitoring the level of upcoding by specific hospitals. Japan should also consider monitoring the composition of DPC coding by prefecture to see if there are coding differences by region.

Summary

The Japanese and U.S. health care systems have a number of important similarities. The two nations have similar hospital payment systems.

The U.S. Medicare hospital payment DRG system has been operational 20 years longer, and the United States has conducted numerous evaluations of the impact of the systems and has made a series of revisions. This paper presents eight lessons from the U.S. experience with Medicare payments to hospitals that Japan should consider. These lessons could help make the current Japanese system more technically efficient and could reduce spending for hospital services.

This would allow Japan to allocate more resources to additional health care services for its aging population and devote more resources to the recovery in northeast Japan.

These recommendations would mean that the DPC system would cover all patients at all hospitals. All hospital expenditures would be incorporated into the DPC system and payment would be on a per case basis. The hospital-specific adjustments would be eliminated. Hopefully, the Japanese health care system would benefit with lower spending, greater allocative and technical efficiency, and better health outcomes as a result of the improvements.

While the U.S. experience suggests that each of the eight recommendations is feasible, they all need to be evaluated in the context of the Japanese system. Japan would need to continually evaluate the performance of the DPC system.

It should be noted that it has been problematic to develop and analyze some of these recommendations in the absence of hard data on hospital performance in Japan. Japan would benefit from making health care payment information more transparent to health services researchers.

Additional data would allow researchers to compare the performance of the Japanese hospital payment system to the performance of other nations' payment systems. This would also allow Japanese health economists and health services researchers to develop their skills. This has proven important in many other countries.

If additional data were made available, it would be possible to compare the performance of the hospitals in Japan to the performance of hospitals in the United States in greater detail. Specific areas that warrant further investigation include:

- The reasons for the long length of hospital stay in Japan;
- The mix of services that are covered by fee-for-service and DPC payments and

how this compares to the bundle of services in the United States;

- The characteristics and performance of hospitals outside of the prospective payment system in each country; and
- The bundle of services used to treat patients in each country.

This analysis would show both the successes of the Japanese system and also identify areas where further improvement is needed.

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日米医療政策プロジェクトは、日米両国が直面する医療政策課題を認識し、課題解決に向けた選択肢を提供することを目的とし、戦略国際問題研究所(CSIS)及び日本医療政策機構(HGPI)が、2011年に共同で立ち上げた。日米の多分野の専門家による、数回にわたる議論を通じ、両国の医療分野における喫緊の課題について、新たな角度からの分析を導き出し、現実的な解決策の提示を目指す。

The Japan-U.S. Health Policy Project was jointly launched in 2011 by the Center for Strategic and International Studies (CSIS) and Health and Global Policy Institute (HGPI) to identify the health policy issues faced by Japan and the U.S. and to provide options for their resolution. Through extensive discussion with experts from diverse fields in both countries, the project aims to analyze the core elements of pressing healthcare issues from new perspectives and to develop feasible solutions.



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