What is DRG/PPS?

Diagnostic Related Groups (DRG) is a patient classification system that categorizes patients into groups according to clinical diagnoses, surgical procedures and financial criteria, notably hospitalization costs. Patients are classified into four levels. In Level 1, patients are grouped according to major disease categories. In Level 2, patients are categorized according to the use or non-use of surgery; in Level 3, patients are grouped according to diagnoses in the case of internal medicine or surgical procedure in the case of surgery; and in Level 4, patients are grouped according to the existence or absence of morbidity or complications and age. The total number of groups is about 500. An example that shows the levels for ophthalmology is given in Fig. 1.

The prospective payment system (PPS) determines the inclusive payment per hospitalization for each DRG. In the case of a patient who has been grouped into the appendectomy DRG, a fixed hospitalization fee for this DRG is paid, regardless of the length of hospitalization or the cost of the drugs used. However, the actual payment varies according to the price-wage level of that region as well as the number of residents-in-training. In the United States, patients are reimbursed for medical costs according to the DRG/PPS by Medicare (health insurance for the elderly and the disabled). But in Europe,
the DRG, which is separate from the PPS, is used as an indicator to determine the budget of each hospital. In addition, physician fees are not included in the United States, but they are included in Europe.

**Historical Background of DRG/PPS**

Prior to the introduction of the DRG/PPS in the United States in 1983, the federal government did not regulate the medical payment system as in Japan. Insurance companies reimbursed the medical costs of patients for the amount that hospitals billed for their services. As a result, Medicare faced a financial crisis; and the amount billed for patients who underwent similar medical care varied considerably between hospitals.

The DRG/PPS method was implemented on a trial basis in the state of New Jersey. Consequently, it was adopted by the federal government when initial concerns such as cost disparities between hospitals and increased re-admission ratios did not occur. The DRG was originally developed to compare patient costs generated at each hospital. Thus, utilizing the DRG as an indicator to determine hospital budgets, as in the case of Europe, is more reflective of its original objectives.

**Implementing the DRG/PPS**

Following the adoption of the DRG/PPS in the U.S. health care system, firstly, the average number of hospitalized days decreased. If a patient was hospitalized longer than the standard number of days set for the DRG, the hospital faced a deficit. In contrast, if the patient was discharged earlier, the hospital profited. In addition, in the United States, the amount of PPS payments made for each DRG was adjusted according to the performance report containing the number of hospitalized days. Thus, the number of hospitalized days tended to be reduced with each revision. This phenomenon is similar to the spiraling decrease in the reimbursement for drugs, reflecting market prices that has occurred in Japan.
Secondly, hospital admissions were reduced, and the hospital occupancy ratio dropped to 60 percent, while the hospitalization of seriously ill patients rose. As a result, hospital wards fulfill the role of ICUs in Japan. Patients, who would have been hospitalized in the past, have come to be treated at outpatient clinics or forced to rely on home health care agencies or nursing homes. In addition, the majority of surgeries have become one-day surgeries carried out at outpatient clinics, and the condition of patients receiving home health care or placed in nursing homes has worsened. Due to this transition, although hospitalization costs were reduced, overall health costs have not necessarily been contained.

Thirdly, due to the fixed and all-inclusive PPS reimbursements for each DRG, the need to maintain the quality of patient care within the PPS framework has facilitated the standardization of health care, notably through clinical pathways. In addition, hospitals have become more careful about reporting the diagnoses and surgical procedures that they provided since their revenue has become dependent on this information. The medical record audit system has also become more strict to ensure that the DRG coding is accurate.

International Trends and the Situation in Japan

The DRG in Europe is utilized as one indicator to measure the efficiency of hospitals and the disparities in costs between health care facilities for regional health care plan purposes. In Korea, the scope of the DRG/PPS has gradually expanded from appendectomies and hernias. Initially, the hospitals opposed the introduction of this system, but it was eventually accepted because it proved to be more profitable.

A Japanese version of the DRG was implemented in Japan on a trial basis at ten national hospitals from November 1998. However, several problems became evident during this trial project. Firstly, the classification system was incomplete and more than 30 percent of the patients could not be categorized. Secondly, the points given to each DRG were based on the existing rates of the fee-for-service payment system. Neither the appropriateness of the health care service nor the cost was reviewed. For example, in the case of cataract surgery for one eye, the average hospitalization period is fixed at 8.5 days or 21,618 points (excluding the surgery), which is clearly an overpayment given the fact that one-day surgeries have become commonplace. Thirdly, the points given for complications in acute bronchitis, degenerative osteoarthritis, and bladder cancer were lower than in cases without complications because the comorbidity information was not recorded accurately.

Therefore, the existing conditions at other hospitals should be investigated before expanding the trial program. Although final diagnoses are essential for the DRG system, only 40 percent of all hospitals prepare discharge summaries. Furthermore, recalculating the charges for each admission from the claims that are submitted on a calendar month basis is not an easy task.

Impact on Future Health Care

The introduction of the DRG/PPS in Japan will have a significant impact on achieving the standardization of health care and reducing the average number of hospitalized days. However, in view of the existing situation in Japan, one method is to utilize the DRG to establish hospital budgets as is the case in Europe, but for only tertiary hospitals where database development and medical record audits are easier to undertake.