

(DRGs) used in the United States, has been adopted on the basis of the belief that costs per case will be decreased by providing more efficient health services.¹ Prior to implementation of case payment, costs were not a major concern for hospitals in Taiwan because hospitals were reimbursed for patient care on a cost-based retrospective system that created incentives for hospitals to provide as many test procedures, patient days, and health services as possible. However, after implementation of a prospective payment system (PPS), hospitals are paid a fixed amount for each patient treated based on codes rather than on actual costs of the resources used for diagnosis and treatment. The PPS allows hospitals to keep the difference between its cost and the rate established for providing patient care, or they must absorb it. Therefore, the PPS encourages hospitals to practice cost containment more strongly than any previous third-party payment systems in order to obtain maximum profits. Implementation of case payment represents a paradigm shift in reimbursement from a cost-based to a cost-containment philosophy.

Nevertheless, based on a literature review, hospitals have responded to different degree to competitive external pressures or financial incentives of third-party payers in terms of costs although a basic economic model of cost-minimizing behavior is still sustained in the health care market. For example, Baker et al. concluded that hospital ownership has an impact on hospital performance in relation to costs and financial management practices.² Friedman and Shortell indicated that investor-owned or for-profit hospitals were more responsive to cost containment because of greater interest in maximizing profits.³ Several studies also consistently documented that hospital ownership is a significant determinant of hospital costs and profitability.⁴⁻⁸ Under the influence of public regulatory agencies and legal constraints on the distribution of profits, non-profit hospital executives may have less freedom to minimize costs or pursue other nonpecuniary goals to a greater extent than their counterparts in for-profit hospitals.⁵ Lee also suggested that as non-profit hospitals are not obligated to pursue the profit-making objectives of owners, their administrators may tend to engage in "conspicuous production" to enhance their

organizations' status and reputation.⁹ These provide evidence that non-profit and for-profit hospitals may respond in different ways or to different degrees to competitive external pressures and financial incentives of third-party payers.

Implementation of case payment has inevitably caused hospitals to provide the most efficient medical care in order to minimize costs and maximize profits. In particular, case payment uses the average of aggregate charge data for all hospitals to calculate weight index rather than based on the actual hospital costs applied by DRGs in the US. This gives hospitals even stronger financial incentives to curtail costs, particularly for private for-profit hospitals. However, although some studies have documented that different hospitals have responded to different degree to financial incentives of third-party payers in terms of costs, few studies have been conducted to examine the possible effects of case payment on costs among hospitals, especially for comparisons between profit-oriented private hospitals and public hospitals. In addition, few studies have been attempted to use national standardized data for comparisons of costs among hospitals. Therefore, this study proposed to use patients undergoing a thyroidectomy without complications or comorbidities in Taiwan to explore the relationship between costs per discharge and hospital ownership under case payment. The reasons for selecting patients undergoing a thyroidectomy without complications or comorbidities as a target case payment item are its high prevalence rate in Taiwan and patient homogeneity in terms of severity level of illness compared with patients treated under other case payment items. The findings in this study may not only help policy makers understand the various extents to which hospitals respond to cost containment under case payment, but they also may help monitor the appropriateness of the medical care provided by certain hospitals more likely to have unusually low costs per patient.

METHODS

Database and Subjects

This study used the *National Health Insurance Re-*