CHAPTER I

INTRODUCTION

Payment of services to the hospitals could be determined by prospective reimbursement or retrospective reimbursement. Prospective reimbursement refers to a variety of third-party hospitals reimbursement methods with two features that are not generally found in retrospective cost-based systems. First, the amount that a hospital will be paid is determined before services are delivered; and second, the hospitals is at least partially at risk for losses or stands to gain from surpluses accrued during the reimbursement period. These features are clearly meant to provide hospitals with incentive to control costs. After implement of the Universal Coverage Health Insurance Scheme, payment method for in-patient service to the hospitals in Thailand is based on Diagnosis Related Groups (DRGs) .

DRGs are derived from the World Health Organization's International Classification of Diseases. Based on this classification, episodes of acute patient care with similar clinical characteristics and levels of resource consumption are grouped into one of several hundreds DRGs. Therefore DRGs are used to classify patients in order to predict costs of treatment and duration of hospitalization. A patient with the same DRG would need similar resources regardless of type of hospital. DRGs cost weight or relative weight (RW) is an indication of the relative intensity of care. It represents the average resources consumption and hence costs of treating an in-patient within a particular DRG relative to the average costs of in-patient treatment across all DRGs. Relative weight (RW) is estimated by using patient-based costing methodology and cost-to-charge conversion ratio, then comparing the average cost means of each DRGs to the average cost for all patients. Base rate is the amount of money paid to the hospital per unit of relative weight. DRGs is expected to be a tool for cost containment, increase efficiency and promotion of equity.

Hospitals are service firm with variable quality and stochastic demand (Friedman and Pauly, 1981). Costs of providing health care services for each hospital are different. There are many factors associated with the variation in hospital costs. Hospital cost function is consequently a function of outputs and input prices; management efficiency is also a factor that should be considered in the function also. In case of hospital's fixed capacity, numbers of beds are the representatives. Labor cost is one of the factors that represent the input prices, which differs between hospitals. Many other hospital's characteristics are related factors that contribute to some variation to the total costs of providing health care services.

In a fully competitive market, total charges (prices) for different case types would be equal to the minimum average costs of production. Eventhough, in-patient services of public hospital are covered by Universal Coverage Health Insurance Scheme and public hospital industry is a non-profit provider, markets for hospital in-patient treatment cannot be characterized as not strongly competitive. The charges for providing in-patient services are in the range of standardized national charges set by the Ministry of Public Health. We assume that all hospital should operate at their full efficiency to minimize the cost per output. Cotterill, Bobula and Connerton (1986) study about operating cost weights and charged based weights of DRGs and founded that both are very similar despite relatively large inter-hospital differences in the total charges-to-operating cost ratio. The relative dispersion of costs or charges across DRGs are very similar, although for most DRGs the coefficients of variation using charge data are slightly higher than coefficients of variation using cost data. In this study, we assume that charges for in-patient services could be imply as cost for providing in-patient services due to some limitation in availability of data.

After implementing Universal Coverage Health Insurance Scheme, budgets for providing health care services are based on capitation (Universal Coverage Health Insurance Committee, 2001). Budgets are directly allocated to each province with two optional payment methods for each province to select and use in allocation of budgets to health care provider.

1.Inclusive capitation payment

This method allocates the total budget by capitation directly to the hospital or main contractor. Budgets for outpatients, in-patients services and health promotion are all included in the capitation to the hospital after deducting the budget for high cost care; emergency and trauma care at the Health Insurance Office. For referral in-patient cases between hospitals in the same province and across province, payment mechanism are based on DRGs and managed by the Health Insurance Board or Area Health Board. Reimbursements are by base rate of 4,000 baht per one relative weight of DRGs in public hospitals and 10,000 baht for private hospitals and the payer is the primary referral hospital. For services high cost care, emergency and trauma, claiming documents will be sent to the Health Insurance Office for reimbursement by the rate that are previously set for each items.

2.Capitation for ambulatory care and DRGs global budget

Budgets for in-patient services are pooled at the central level of the province and Health Insurance Committee or Area Health Board is the fund manager for in-patient services. Reimbursement rates per one relative weight of DRGs are determine by the total budgets for in-patient services and total relative weights for in-patient service in that province. In-patient services and referral cases of every hospital in the province are based on the calculated reimbursement rate of that province. Referral cases between provinces are base on the rate set by the Health Insurance Office at 4,000 baht per one relative weight of DRGs for public hospitals under the Ministry of Public Health. However for private

hospitals, university hospitals and hospitals outside the control of Ministry of Public Health the rates are set at 10,000 baht per one relative weight of DRGs. The differences between reimbursement rate is that capitation budget for public hospitals in the Ministry of Public Health exclude the labor cost of the government officer from the budget at the central level already, while reimbursement rate for other hospitals includes the labor cost of health personnel.

1.1 Statement of the problem

The Ministry of Public Health has many different levels of hospital ranging, from community hospitals, provincial or general hospitals, regional hospitals and also special care hospitals. These hospitals receive the same base rate per relative weight of DRG while the unit cost per output of each hospital is not the same. Some hospitals may receive reimbursement more than they need while some hospitals may receive reimbursement less than the actual cost. From the study of Pannarunothai and Kongsawat (2001) about cost per DRG relative weights from 3 regional hospitals, 3 general hospitals, and 17 community hospitals founded that recurrent cost per relative weight for community hospitals was 2,963 baht, general hospitals was 7,386 baht and 7,140 baht for regional hospitals. Inadequate cost weights is problems in case-mix funding system. Valid patients costing data is need to benchmark and improve cost-effectiveness while maintaining and enhancing quality.

In determining the appropriate reimbursement rate for the hospital in-patient services in different levels of hospital, we should consider of some factors that contribute to the cost per output of that hospital. Factors that are related should be taken into consideration in calculating reimbursement rate in order to balance the cost of providing services. The reimbursement rate should be adjusted by these related factors to assure equity in reimbursement of providing services.

From previous review, this study will take focus on what factors effect average charges for providing in-patient services of hospital, due to some limitation in availability of data and to what degree are these factor should be taken into focus to set up an appropriate model for reimbursement.

1.2 Research Questions

1.2.1 What is the average charge per one relative weight of DRGs?

1.2.2 What are average charges per one relative weight of DRGs in different groups of hospitals?

1.2.3 What factors affect average charges for providing in-patient services?

1.2.4 What are the factors that should be used to adjusted reimbursement rate for DRGs?

1.3 Research Objectives

1.3.1 To estimate average charge per one relative weight of DRGs.

1.3.2 To estimate average charge per one relative weight of DRGs in different group of hospitals.

1.3.3 To identify factors that are related to average charges per 1 relative weight of DRGs.

1.4 Scope of Study:

This study will focus on reimbursement rate of DRGs for in-patient services in public hospitals under the Ministry of Public Health except hospitals in Bangkok. The hospital's data of in-patient services are reported as DRGs. Other associating factors from hypothesis will be taken into consideration and analyzes in term of relation to resource allocation of reimbursement for in-patient services.

1.5 Possible Benefits of the study

The results of this study will have some suggestions about factors that are related to hospital charge, which leads to estimating the base rate per 1 relative weight of DRGs. From current allocation criteria, reimbursement rate is the same for every hospital. This study should be able to suggest that; reimbursement rate should be equally rated or adjusted payment based on relating factors from this study. The results will be useful for policy implications, in efficiency allocation of financial resources for in-patients service in public hospitals.