#### CHAPTER I

# INTRODUCTION

### 1. Rationale of the study

Budget allocation is a mechanism to control and monitor an organization's operation. Planning process and policy development is the first and most important step towards the organization's success or failure. This step, like a map, gives an organization a destination route to follow (Pannarunothai, 1999). Like other countries, Thailand has long developed a government budget allocation system. In the public health sector, the former health budget allocation was based upon the number of doctors and bed capacity which is considered to be an inequitable system. This inequity can be evidenced by a concentration of doctors and bed capacity in major cities, e.g., Bangkok and its surrounding provinces. Until 2001, Thailand reformed its health insurance system and allocated the public health budget under a new paradigm of universal coverage or 30 baht policy. This new approach has allocated a budget based on capitation for outpatient and a global budget based on the relative weight (RW) of diagnosis related groups (DRGs) for inpatients (1,202 baht per capita for both outpatient and inpatient in 2001). By this approach, the new system is expected to be better and more equitable than the previous one (Ministry of Public Health, 2001).

However, Thailand applies the same methodology of public health budget allocation for acute care and sub-acute and non-acute care in various settings. This method might create problems in the psychiatric setting due to many reasons:

1. Success in a psychiatric patient's treatment is sensitive and complex. It needs many party involvements due to specific characteristics such as disease, patient's acceptance, cost structure, etc. (Phuaphanprasert, Sanichwannakul & Pannarunothai, 2003)

- 2. Cost structure and cost behavior of sub-acute and non-acute care are different from acute care. For example, psychiatric nursing cost is a major cost for psychiatric care as medication cost is major for medical care. Psychiatric cases have less severe symptoms but require a longer hospital stay (Phuaphanprasert et al., 2003); (Lee, Eager & Smith, 1998); (Eagar, Gordon, Hodkinson, Green, Eager, Erven & et al., 1997)
- 3. DRG, which recognizes diagnosis as a major concern for acute disease, is appropriate and well accepted for acute disease classification. However, DRG has still some limitations when applying to non-acute and sub-acute disease because the relative weight (RW) of DRG cannot reflect resource use or care cost correctly (Buckingham, Burgess, Solomon, Pirkis & Eager, 2003); (Pfeiffer & Hofdijk, (Eds.). 2002); (Pannarunothai, 1999); (Lee et al., 1998); (Casas, Miriam & Wiley, 1993).

For the overall Thai public health budget, the mental health budget only accounted for 1.4 billion Thai baht, or 3.5% of the overall budget in 2003 (Budget Bureau office of the Office of Prime Minister, 2003). This contrasts with psychiatric disease which will globally become a leading disease burden in the future as stated in the World Health Report 2001 (World Health Organization, 2002). Since the committee of the Ministry of Public Health set up the payment charge for psychiatric care for the universal coverage scheme to be much lower than its actual cost, it created a mismatched revenue-cost relation that would eventually create long-term problems. For example, in the case of hospital stay shorter than 15 days, an inpatient will be reimbursed on a relative weight basis with a global budget or at the rate of 165 baht a day for a maximum of 15 days (Ministry of Public Health, 2001). In 2001, psychiatric inpatient service cost was 19,632 baht per case or 435 baht per day (Siriwanarangsarn, Likanapichitkul & Chakapandhu, 2001), while the cost by RW of DRG by the Mental Health Department was 8,298 baht per relative weight of DRGs (Chattananont, Mahatnirankul, Phuaphanprasert & Sunanta, 2001).

Due to the above problem, distorted provider misbehaviors have been observed as follows (Phuaphanprasert & Pannarunothai, 2003):

- 1. Decreasing number of psychiatric inpatients in tertiary psychiatric care level
- 2. Increasing number of psychiatric inpatient admissions and readmissions in primary and secondary care level
- 3. Decreasing non-profitable service in tertiary hospital, e.g., decreased special investigation
  - 4. Decreasing hospital stay in tertiary psychiatric hospital level.

According to evidence from developed countries, budget allocation by casemix approach usually divides patients into 3 groups: acute, sub-acute, non-acute. By casemix classification approach, budget allocation is dependent on patient characteristics. In Australia, the Mental Health Classification and Service Costs (MH-CASC) used many predictive factors to classify psychiatric patients. These consist of diagnosis, age, co-morbidity, complication, severity of symptom, level of functioning and social status, risk to harm to himself and others, socio-geographic characteristics, and state of disease. This psychiatric casemix system was accepted to be better than DRG when applied to sub-acute and non-acute patients (Buckingham et al., 2003). However, direct implementation of a foreign system might not be appropriate because each country has its own factors, e.g., treatment pattern, social, and cultural characteristics.

The Thai public health budget allocation for psychiatric patients needs more economic and public health, data to assess system elements and problems. However, problems affecting mental health system development are as follows: Mental health measurement has been employed in a few psychiatric hospitals. Specific measurements for certain conditions are used on a case-by-case basis. Therefore, it is worth exploring how appropriate and how worthy the mental health outcome measurement is (Chansan, 2004, pp. 345-52)

1. Financial database for Thai's public health system is recorded on a cash basis despite many efforts to change it into an accrual basis. This problem makes

reporting inconsistent, untimely, and inaccurate (Phuaphanprasert & Pannarunothai, 2003).

2. Contrary to activity-based costing (ABC) system, cost study in Thailand has currently utilized a traditional cost accounting approach which creates over-costing for routine services and under-costing for special investigation. Traditional cost approach normally calculates average cost by giving less weight to patient services. This is due to lack of information to allocate appropriate cost data for psychiatric services (Phuaphanprasert et al., 2003).

In conclusion, the Thai mental health budget allocation system needs appropriate planning and policy development to respond to current rapid changes in the health system. Available database shows potential in developing a casemix system but methodology as seen has to be developed. Therefore, it needs to study alternative public health budget allocation for psychiatric care. This method may lead to good planning, system design, and policy making which are the key success factors for the budget allocation system. Additionally, this study also illustrates the alternative approach which gives more equity and reduces conflicts of interest to related parties, enhances service quality (Buckingham et al., 2003).

## 2. Purpose of the study

The aim of the study is to explore and analyses the alternative resource allocation model using for inpatient in Thai psychiatric hospital that is expected to be more efficient and equitable than the traditional one.

The principal aims of the study are:

- 2.1 to develop mental health assessments for Thai's mental health inpatients budget allocation by deriving clinical data from each patient such as severity of symptoms and level of functioning to split inpatient grouping;
- 2.2 to calculate inpatient service costs both by traditional method (TM) and activity-based costing method (ABC) and use them in classifying and calculating relative cost weight of mental health inpatients procedures;

- 2.3 to classify inpatients by casemix approach from cost and their attribution such as clinical symptoms and socio-demography characteristic in order to find an alternative Thai mental health inpatient classification model;
- 2.4 to compare performance of the classification models from this study with the DRG approach.

## 3. Scope of the study

The scope of this study covers many tasks as follows:

- 3.1 It covers a studying behaviour of doctors and nurses' and their opinions toward budget allocation and measurement using as a tool of allocation. This part covers doctors and nurses' who working in special psychiatric service settings.
- 3.2 It develops mental health measurements. The measurement should be an outcome mental health measurement for using as a tool in budget allocation.
- 3.3 It calculates psychiatric service care costs. The costs should be calculated inpatient service costs by traditional method (TM) and activity-based costing method (ABC) and use them in classifying and calculating relative cost weight of mental health inpatients procedures in the co-research-hospitals.
- 3.4 It classifies inpatient by casemix classification approach by using services costs and patients' attributions such as clinical symptoms and socio-demography factors as variables. The sites in this part covers the two co-research hospitals under the Thai's Mental Health Department.
- 3.5 It compared performance of the two alternative funding models. This part covers the Thai diagnosis related group (TDRG) and the new Thai mental health casemix classification (TMHCC) in three aspects; models' structure, statistic performance, and experts' opinions.