สำนักงานวิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER 3

RESEARCH METHODOLOGY

This chapter covers necessary tools needed to get into the analysis of the stated research questions and the general and specific objectives generated out of them. Since this is rather a new area of system development, a full section is devoted to clarify the terms and operational definitions used in the study. This is expected to build an understanding of the P/P mix management in the context of Ban Paew of community hospital. A conceptual framework for the study is discussed in the following section. From then on details are provided on the study design, data collection and methods to be used for the data analysis.

3.1 Terms and Operational Definitions

Public/Private mix (P/P mix): The component of the private entrepreneurial management principles applied in combination with the public or government system. A conceptual presentation of P/P mix is provided below that should be analyzed in the context of Ban Paew hospital:

Fig 3.1: Conceptual Approach of the Public/Private Mix

		PROVISION OF SERVICES	
		PUBLIC	PRIVATE
FINANCE	PUBLIC	• Free OPD and IPD patients care; • MCH/EPI and health education and promotion; • Ambulance services;	• Hospital food supply; • Cleaning services; • Selected diagnostic services; • Selected treatment procedures;
	PRIVATE	• Private paid beds; • Pre-paid (insured) patient care; • Supplementary drugs; • Training and Research.	• Private insurance and hospital scheme; • Private clinic and hospital care; • Ambulance Services.

Autonomy and Decentralization of Management: Bureaucracy of decision making in the public sector has been cited as an obstacle to the efficient functioning of the public hospitals and health care system. To ease up the situation the Ban Paew hospital management has instituted some sort of autonomy for the selected activities that require faster and efficient actions. One such attempt has been the setting up of 'Ban Paew Hospital Foundation' that is responsible for the sum of donated money and materials coming directly from the community.

Community Participation and Financing: This well known concept is widely practiced in many public and non-profit private hospitals as well as other social and community services. The term itself means the community leaders and people actively get involved in their own matters and contributes in every possible way to improve their conditions. In Ban Paew this should be considered as an important component because of its strong influence on the functioning of the hospital activities and share of financing of the hospital.

After-hours OPD Clinics: In public hospitals, OPD services are open from 8:30 to 16:00 hours on working days except for the emergencies which is open round the clock. OPD is closed during the weekend and on holidays. The private hospitals, in contrast, keep such services open until 21:00 hours or even longer. The latter schedule is particularly suitable for the working class people who otherwise have to take leave to attend OPD services. Ban Paew hospital has introduced this after-hours OPD services from 16:00 to 21:00 hours in 1992 including weekend and holidays. In recent months they are testing with the opening of OPD services from 21:00 to 24:00 hours.

Satellite OPD Services: Outreach of services to the patients is important for confidence building as well as linkage with the prospective users. Normally government run health centers should serve this purpose. But because of the multitude of problems, many patients are loosing confidence in the health centers and are going to the private clinics and healers instead. Satellite OPDs are located outside the main hospital, often in the center of large communities, but are served by the same staff from the hospital. This provides direct linkage between the hospital and the OPD patients.

Private Beds in the Public Hospital: This is not necessarily a new concept as many provincial and central level hospitals offer private

beds to the patients for room charges. Usually other services are similar to the unpaid general beds. However, this is a new idea at the district level in Ban Paew that require careful analysis as to suitability of its usefulness. This could be one of the most simple method of P/P mix in many public hospitals.

Non-private Practice: This is a policy applicable to the hospital staff who make commitment not to get involved in the private job outside their official duties. The underlying theme is to allows public sector staff to fully concentrate on their public work rather than sparing time to their second job. The latter situation may often lead to conflict of interests with their primary job in the hospital. This is very common to see that if a doctor provide good care to general patients in the public hospital will usually adversely affect the growth of their own private practice. In another words, these doctors take away patients from their private practice only to be treated free of charge in a public hospital.

Non-practice Allowance: This is the sum of money paid by the hospital (or government) to the staff for not being involved in the private practice as described above. The amount of money should be seen as a minimum compensation for the loss of their expected income in the private market. The non-practice allowance is applicable to doctors, dentists and pharmacists and not to nurses, midwives, lab technicians or other staff.

Contracting Out Public Services to the Private Sectors: Normally, public hospitals tend to do all necessary services by itself and acquires its own administrative and technical resources. Ban Paew is testing the benefits of contracting out some of the non-technical services to the private sector e.g. hospital food supply. In the future more such services can be subcontracted e.g. cleaning, laundry, security, ambulance, special diagnostic tests, special treatment etc.

Users' Fee in a Public Hospital: This is not a new concept in Thailand as all public hospitals are expected to raise local revenues through patients services. Usually people who are not covered by any insurance scheme are required to pay for the drugs and other services. If some of them cannot afford to pay they have to be proved so before being qualified for social welfare support. In Ban Paew users fee is considered as an important source of income for the hospital.

Economic Evaluation: This will cover - a) cost-recovery as total cost/total revenue x 100; b) changes in cost-recovery pattern before and after the public/private mix management interventions.

Recurrent or Operational Costs: This type of costs are required to be provided every year, perhaps a little bit of change from year to year, without which functions of the hospital will be disrupted. Examples are staff salaries, maintenance of medical equipment, drugs and supplies, utilities - electricity, water supply, telephone bill etc. Recurrent cost is important in a sense that the activities depend on it in many respect.

Capital Costs: These are one time investment that will not be required to repeat every year. Capital cost are most relevant to the initial opening and/or expansion of the activities e.g. a new building, furniture, large medical equipment, car and ambulances.

Total Costs: This is equal to the Recurrent cost plus Capital cost as defined above and constitutes all kinds of cost incurred to the hospital.

Revenues: These are incomes earned by the hospital from various sources. Some of the revenues are directly linked to the services it provide to the patients and others are paid for by the community or the government that are not directly linked to the services. They greatly differ from one scheme to the other.

Cost Recovery: It is the proportion or share of the actual revenue against the actual cost of the services, expressed in terms of percentage. The formula:

Cost Recovery = Revenue/Cost X 100.

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3.2 Conceptual Framework

A broad conceptual framework of the research is presented in Figure 3.2. The upper half of the figure provides a comparison among public, private and public-private mix managed hospitals. Out of the necessity for a simplified presentation, the objective variables are drawn in from varieties of rational planning process e.g. policies, resources, activities and the outcomes. The first column shows the critical issues - strengths and weaknesses - of a usual district community hospital in Thailand. The second column shows the nature of a for-profit private (not the non-profit charity) hospital. The third column shows the possible criteria of a P/P mix managed hospital like that of the Ban Paew community hospital.

The bottom part of the Figure 3.2 in its left column provides the key problems of a usual public community hospital. The middle column shows key private sector interventions in Ban Paew hospital. Finally, in the right column describes the major outcome in the functioning P/P mix hospital. Detailed analysis of each of the components will be elaborated in the data analysis section using the available existing data.

It must be emphasized here that there might be some confounding factors that might have affected the outcome in the hospital e.g. industrialization in the district, introduction of Social Security Scheme (SSS) that are independent of privatization. Every efforts are made here to provide analysis of those situations separately. Similarly, the utilization pattern of the hospital might have been influenced by the above factors as well as other unrelated issues. This question will require careful sensitivity analysis. Lastly, the effects of the changes in the hospital might have affected the provincial level of care. Because of multiple constraints such issues are not studied in details but suggestion are made as for their needs in future.

Fig. 3.2: Conceptual Framework of a P/P Mix Hospital

Public Community Hospital	For-Profit Private Sector Hospital	Public-Private Mix Managed Hospital
Strengths: 1. Intended equitable services for all citizens; 2. Comprehensive curative, preventive, promotive services; 3. Line referral system to the provincial, regional and national hospitals; 4. Free or less expensive for the users; Weaknesses: 1. Long waiting time, low quality care and poor acceptance by people; 2. Inadequate staff benefits and low motivation; 3. Slow administrative decision making process; 4. Poor marketing of the available services; 5. Poor revenue collection and inadequate financing;	Strengths: 1. Fast and efficient decision making process; 2. Better marketing of the users' friendly services and acceptance by the people; 3. Competitive staff benefits and higher staff motivation; 4. Good cost-recovery and economic efficiency; Weaknesses: 1. Little concerns for the equitable services; 2. Usually limited to profit making services only; 3. Expensive and accessible only to the high income and the insured people; 4. Usually the cause of cost escalation of health care services;	Strengths: 1. Maintenance of equitable care for all citizens; 2. Maintenance of preventive, promotive and curative care; 3. Referral of patients to the public and private hospitals; 4. Decreased waiting time and improved quality of care; 5. Better marketing of the available services at competitive prices; 6. Increased revenues and better financial situations; Weaknesses: 1. No clear administrative and management support system in place; 2. Not many documented experiences of P/P mix; 3. Difficulties with the free market economy because of `imperfect information' etc.

Key Problems	Interventions	Major Outcomes
A. Long waiting time;	1. After-hours OPD clinics; 2. Satellite OPD services;	1. Increased access and utilization of services;
B. Low quality of services in the hospital facilities;	1. Improve physical comfort by better reception, air-conditioning and TV; 2. Introduce `specialist' services at the hospital;	1. Improved acceptance and attendance at the hospital by patients and the insurers; 2. Improved enrollment in the insurance schemes;
C. Inadequate interactions with the community;	1. Improve community participation - the NGOs, community leaders and other interest groups;	1. Better utilization and management of the hospital; 2. Improve community financing of the hospital;
D. Poor marketing of the available services to potential users;	1. Contract with the Social Security Scheme, Private Clinics and Hospitals; 2. Allow outside health services to use hospital facilities and equipment;	1. Expand users' base and catchment areas of the hospital and its acceptability; 2. Improve revenues earned from the external sources;
E. Slow and inefficient public administration system procedures;	1. Create decentralized `autonomous' hospital management; 2. De-regulation of certain public policies;	1. Faster and efficient management at the local levels 2. Better use of external resources and finances;
F. Inadequate staff benefits and low morale;	1. Non-practice allowance; 2. Boast over-time payment for extra work and duties;	1. Better staff benefits; 2. Improved staff morale.
G. Poor cost-recovery and financial situations;	1. Increase users' charge and pre-paid (insured) care; 2. Increase community financing;	1. Improved cost-recovery for services in the hospital; 2. Better financial situation;

3.3 Study Design

This is a descriptive study covering data from 1987 to 1995. In 1987, the new hospital director has been appointed who has initiated all P/P mix activities over last nine years. Patient data are collected for the total duration of nine years from 1987 to 1995. The longer duration of patient data is intended to provide a clear analysis of the utilization pattern of the hospital services following implementation of P/P mix activities. Because of the difficulty to collect the economic data, it has been done for only five fiscal years from 1991 to 1995. Each of the fiscal year begins in October of previous year and ends in September of the same year. As most of the data and statistics come from the hospital records and its staff, the predominant views of the study are of that of the providers. Limited patients' and community views are studied in the selected parts of the study e.g. satisfaction of the services and community financing for the hospital.

3.4 Study Methods

Based on the conceptual framework as described in the Figure 3.2, some key outcome variables are chosen for detailed analysis. The methods for the measurement of these variables along with the sources of necessary data and information needed for the analysis are presented in Figure 3.4. Brief descriptions of the methods of measurements are provided in the following section.

Figure 3.4: Methods of Outcome Measurement of P/P mix

Outcome Variables	Methods of Measurement	Source of Data
A. Accessibility and Quality of Services	Physical Verification of - 1. After-hours OPD services; 2. Satellite OPD in Ban Paew II; 3. Efficient Patient Record Keeping and Better Follow-up System; 4. Patients' Travel and Waiting Time; 5. Physical Conditions - Air-conditioning, Television, Cleanliness and Reception; 6. Modern Diagnostic Equipment; 7. Private Patients' Beds; 8. Specialists' Consultation and Services; 9. Efficiency Referral System;	1. Hospital Staff; 2. Community Leaders; 3. Hospital Patients; 4. Hospital Records;
B. Hospital Utilization	1. Count OPD and IPD Patients; 2. Count Enrollment in Special Health Care Schemes - SSS, HCS etc.; 3. Verify Trends of #1 and 2; 4. Compare the Above Data with Krathum Baen Hospital; 5. Compare Patient Data with Hospital Revenue Collection;	1. Ban Paew and Krathum Baen Hospital Patients' Records; 2. Health Scheme Enrollment Records;
C. Equity of Health Care;	1. Free or Partially Free Health Care for the Selected Groups - Low Income, Elderly, Disabled, Religious Groups, Village Headmen, Health Volunteers and War Veterans;	1. Hospital Patient Data.
D. Economic Evaluation: Revenues and Cost-recovery	1. Calculate Hospital Revenues and Expenditure; 2. Breakdown of Revenues by Sources; 3. Calculate Cost-Recovery (%) by Sources of Income; 4. Calculate Operational Cost and its Sources of Income; 5. Calculate the Profit/Loss Margin;	1. Various Hospital Accounts and Financial Records and Reports;

3.4.1 Accessibility and Quality of Care

Physical verifications are made on the defined activities as described in the Figure 3.4. Indirect measurements are made by the analysis of correlation between statistical data and the accessibility as well as the quality of care.

3.4.2 Hospital Utilization

The hospital utilization is measured by the OPD and IPD patients attendance and their trend over nine years period when the new hospital director has begun series of activities to boast the functioning of the hospital. It is acknowledged that the hospital data are only a indirect method of measurement of utilization. Ideally, direct measurement of the utilization should be conducted by systematic interviews of the people, patients and community leaders. But in consideration of the time constraints, descriptive analysis is concentrated on the hospital patient data and limited interviews with the community leaders.

Ban Paew community hospital utilization data are also compared with Krathum Baen community hospital, another community hospital in the vicinity of the same province that have almost similar socio-economic conditions. This is expected to elaborate any obvious change that might have taken place in Ban Paew hospital. Finally, the trend of hospital revenue collection is used as an indirect method of measurement of the hospital utilization.

3.4.3 Equity and Efficiency of Services

In this section analysis is focused on the access and utilization of the hospital by various segments of the society especially those of the low income population. Within the limited data available, analysis is made on the improvement of economic and management efficiency towards equity due to the P/P mix.

3.4.4 Economic Evaluation

Hospital accounting costs are analyzed to determine the economic conditions of the hospital. Because of the limitation on the availability of data as well as time constraints, no attempt is made on the full economic evaluation of the hospital. Moreover, as the study

objective covers overall economic evaluation, it may not be appropriate to go into details of one or other components of the economic analysis. However, in the Chapter 5 on discussion some methodologies are suggested for future full economic evaluation, if desirable.

Cost-recovery is analyzed, first in consideration of the direct and indirect revenues earned from the patient services. This is very important as it is a well known fact that the government funding is not sufficient for the running of a quality community hospital. Therefore, the strength of cost-recovery from the users is expected to play a crucial role and in fact, this has been one of the main objective of the management restructuring of the hospital. Secondly, the analysis has made on the transferred finance to the hospital by the government and community.