CHAPTER 1
INTRODUCTION

1.1 Introduction

Over the past decades, as pressure to control health care spending have accelerated, the term **"cost-effective or cost-effectiveness"** has come increasingly into common word. Its usage by many groups and organizations to provide guidance to the many who might use the information generated by a cost-effectiveness analysis (CEA) in improving the quality and efficiency of the health care system.

All countries face an unfortunate reality in health care. Access to high quality care technically possible for all people is more expensive than our economies seem to be able to afford. Therefore, as public service providers practising in developing country with low per-capita income, we still need to provide the high quality care and the maximum access to that care, given the resources that our economy can afford.

As health care providers, our primary commitment is to provide the best care to our patients. However, we also want to spend the available resources in the most effective fashion. If we are to measure costs and benefits of a health care strategy, we need to have a clear idea of the overall objective which is being served and the criteria for judging success. At the most general level, economists argue that the goal should be to maximize social wealfare.

Within the health care sector, better health may be a significant motivation for providing health services, but there are other values too, such as reassurance and increasing social cohesion. Furthermore, at the level of evaluating health care intervention, we need to consider not only health outcome gains but also the relief of pain, reduction of anxiety, reassurance to relatives and the impact of the process itself.

Since 1996, the Ministry of Health (MoH), Cambodia has been implementing a Health Coverage Plan (HCP) to increase access to health facilities throughout the country. The plan divides the country into 69 Operational Districts (OD), each having a referral hospital and a number of health centers that provide basic health care. Most facilities have been constructed

or renovated and supplied with medical equipment. Moreover, more facilities enjoy a regular supply of essential drugs through Central Medical Store (CMS). Meanwhile, the health sector is slowly recovering from the lack of trained high-skill medical staff. However, some constraints remain:

The lack of government funding in the public health system (depressing staff motivation and undermining ethical behavior): government health planed budget for running cost, for year 2000 was US$2.7 per capita, was lower than that of most sub-Saharan countries. Fortunately, the trend has been upwards in recent years. However, the inflexibility of health budgets has led to a situation where some budgets (like running costs) are nearly adequate. While salaries of government staff remain very low, US$10 – 15 per month (Van Damme & Messen, 2001). Salaries have been doubled to US$20 – 30 per month since 2002. It is estimated that, at least US$100 - 150 is needed per month to cover the minimal cost of living.

Some staff officially on the payroll did not exist, others never showed up at work, and the rest usually work only one or two hours a day in the public service. The quality of care delivered was often poor. Most patients in public health facilities had to pay informal fees, got prescriptions for the private pharmacy, or were induced by some health staff to consult at private practice. Indeed, most of the government staff has their own private practice because of the low salaries. Another main constraint was the scarce resources were spent in an inefficient way. It was very difficult to get a hospital running with these constraints.

Unequilibrium between demand and supply for health care in Cambodia: public health facilities provide standadized packages of activities[1], which do not include popular treatment services such as injection and infusion at health center levels. No good referral system from health centers to hospital. Furthermore, the hospital could not cover the full complementary packages of activity (CPA) (surgery, X-ray, blood bank, and staffing) as standadized in the national guideline for developing operational district. Consequently, the new health centers were almost empty and very few patients were hopitalized in the hospital.

The Basic of a New Deal (1999), was a general disatisfaction with the public health system shared by all actors involved. That was the starting point to negotiate a New Deal. The New

[1] MPA = Minimum Package of Activities for health centers, and CPA = Complementary Package of Activities for hospitals.

Deal uses better income for the health staff as an entry point for obtaining a higher accountability at all level of the staff. A health financing scheme is set up to fund the New Deal, using income from government budgets and from user fees, complemented with additional inputs from external subsidies.

A steering committee guides the project, and aims at obtaining wide involvement of key actors in the health sector in Cambodia. The project had 3-years time perspective. In year one, 2000, the project concentrated on building up the system; in year two, 2001, the project concentrated on improving the system; and in year three, 2002, the project focused on sustainability (Van Damme & Meessen, 2001).

After three years of implementing the project, the New Deal in Sotnikum has made a remarkable progress, as compare to the past in the same hospital, and other hospitals without New Deal (or routine activities), that include Kralanh hospital. Comparatively, the New Deal is good for producing a quantitative increase.

The general increase in macroeconomics of the country and the budget reform policy and implementation (such as ADD, PAP) should bring the significant benefits from health care delivery, especially to the poor. Some public piloted health facilities (like Takeo and Sotnikum hospitals) have proving successful by investing more resources from external donation.

Health and growth: when the health service produces more outputs to the population, it means that it improve the health state of the population and shares the economic growth of the country. In general, it is expected that better health will contribute to economic growth and that economic grouwth will contribute to better health – i.e. that there is positive relationship between them. Economic stagnation or decline also reduces the resources available to governments to invest in public health programmes or poverty mitigation.

Public health facility utilization improvement is a main part of poverty reduction among poor people. Therefore, to increase the utilization rate of the population at Sotnikum and Kralanh hospitals, the factors that need to be considered are continuous quality improvement (CQI), cost and effectiveness.

This topic is in accordance with government health sector reform (HSR) policy in Cambodia that is geared towards improving equity in access to and utilization of good quality services by the population, especially the poor, as well as making the best use of available resources. This involves the changing from an "administratively organized to a population based system", and the equitable formula based allocation of funds.

Thus, the public health spending is deployed where it generates the best returns and delivered the cost-effectiveness services that benefit the poor. Furthermore, this topic is new, and has not been studied before. It can provide some basic ideas and benefits hospital managers and/or all stakeholders as well as policy makers, and successful implementation of the new deal at Sotnikum hospital.

Because of the general rsources constraints in Cambodia, providing health care at least cost is the primary aim of the policy makers, health care providers, and all stakeholders especially district and provincial health managers. They must therefore use available resources as effectively and efficiently as possible. The optimal use of resources requires clear and accurate information on resources flow, and on the impact that resources have on the quality and performance of health services.

This study is designed to provide especially hospital managers with guidance on how to use CEA as a tool to achieve better understanding and management of resources flows. A firm understanding of this analysis at operational level represents an important step towards more efficient and equitable provision of services. The long term sustainability of health and medical care provision is also depends on the comprehensive application of cost analysis and cost-effectiveness tools and methods.

In this study, the outcome of interest, economics and health state gained by each individual from hospital services utilization, is common to both hospitals that provide services by differential process. However, the hospitals may have differential success in achieving this outcome, as well as differential costs. After three years of implementation, the New Deal basically works, but we are not sure that Sotnikum hospital is more cost-effective compare to the hospital that implement the conventional system under health sector reform. Thus, this study poses three main questions:

(1) What are the costs and effectiveness in terms of number and proportion of service utilization in the catchment area of Sotnikum and Kralanh referral hospitals?

(2) Which hospital is more cost-effective?

(3) Was increasing in service utilization in Sotnikum hospital really the achievement of the New Deal?

1.2 Objectives of the Study

The study aims at a better understanding of the effectiveness of inputs used in health care productivity, utilization of the health care services and equity aspect of utilization of the New Deal project in Sotnikum hospital and the conventional activities under health sector reform in Kralanh hospital in Cambodia.

(1) General Objectives

The general objectives are to compare cost-effectiveness of the New Deal in Sotnikum and the conventional activities in Kralanh hospitals from providers' perspective, and to compare patients' satisfaction between the New Deal and conventional system in Sotnikum hospital.

(2) Specific Objectives

a) To calculate costs of health care service delivery in Sotnikum and Kralanh referral hospitals.

b) To measure the effectiveness of health care service delivery in terms of number and proportion (compare with target population) of service utilization in the catchment areas covered by Sotnikum and Kralanh referral hospitals.

c) To compare cost-effectiveness of the New Deal in Sotnikum and conventional system in Kralanh hospitals.

d) To compare the patient satisfaction between the New Deal and the conventional system in Sotnikum hospital.

1.3 Scope of the Study

This is a case study about cost-effectiveness of health care service provision under the health sector reform at Sotnikum hospital under New Deal approach and at Kralanh hospital under conventional activities. A small scale of non-probability survey was conducted to assess patients' satisfaction on New Deal to confirm that the increasing of the service utilization in Sotnikum hospital was the effect of this project.

The total costs of health care service delivery were calculated from providers' perspective. The effectiveness indicators were measured in terms of volume of service utilization, i.e. IPD and OPD, both in number and in proportion compared with target population in the catchment areas of the two hospitals.

All of the cost components of health care service delivery; number of discharged patients, number of patient days, number of new OPD cases, and number of OPD visits; were collected at Sotnikum and Kralanh hospitals from 1st January to 31st December 2002. Sotnikum and Kralanh hospitals were selected to study because:

- The two hospitals are located in the same province
- They are at the same operational level (district referral hospitals include number and level of staff)
- Pattern of diseases were similar (Annual Health Statistics Report)
- Similar socio-economic status across the province
- Accessibility to data and information

1.4 Expected Benefits

Cost-effectiveness analysis is a method used to evaluate the costs and outcomes of health care services delivery designed to improve health. The possible benefits of this study were:

- To help policy makers to use CEA as a guide to resource allocation in health, especially from central to operational level. CEA shows the tradeoffs involved in choosing intervention between hospital with New Deal and hospital with conventional system.

- To help hospital managers make proper or efficient use of scarce resources, and to know the costs of activities and its outputs in providing health care services between the two hospitals.

- According to the results of the study, hospital managers can select the intervention with the lowest cost per unit of effectiveness of the two hospitals.

- Determination of CEA of the two hospitals can help policy makers to decide how to improve future policies for effective management of resource allocation, utilization, and quality of care to maximize social welfare.

- The study also provides basic hospital cost analysis with possibilities to use and expand the New Deal to other public health facilities at any size and to find efficient strategy for sustained health care service provision.