



## CHAPTER 2

### LITERATURE REVIEW

#### 2.1. HEALTH CARE FINANCING

In 1987, World Bank recommended increased cost recovery as part of agenda for financing public provided health services in developing countries. In sub-Saharan Africa, government health services were often free of charge or offered with high subsidies. Chronic shortages of finance for recurrent inputs, such as drugs, were severely reducing the effectiveness of existed health services. Further more, health systems had not achieved complete coverage of the population, particularly in rural area. Revenue from increased cost recovery from clients was therefore proposed as a means of improving the quality, effectiveness and coverage of health systems.

Introducing of raising user fees was also envisioned as away to improve the efficiency and equity of health systems. Price signals can be used to direct clients to obtain services where they can be provided at lowest cost, and to discourage excessive use of health care. Higher income group tend to consume more health care and more expensive services; charging those who are most able to pay frees up resources for subsidizing the poor and will divert wealthier clients private sources of care. Fee exemptions were advocated for those too destitute to pay. It was thought that the improved effectiveness and quality of health care possible with higher user fees might actually raise the use of medical care, despite higher prices. Thus increase revenue improved efficiency and equity were the most compelling arguments for introducing or augmenting user fees in Africa countries.

Concern remains widespread, however that increase user fees in government-operated facilities or expansion health insurance may not be affordable, thus denying the poorest people access to modern health services. Household surveys reveal that more than half of those who fall ill do not seek care at modern facilities but, rather, “self treat”, drawing on their own remedies, locally purchased drugs, or traditional healers. In some cases, the price for consultations, the cost of transport and drugs and

employment earnings forgone while seeking modern medical care may be responsible for this situation. In a region where about 48% of the population, or 216 million people, were poor in 1999, the ability to pay for essential health care takes on immense importance. However another reason for the seemingly low utilization of modern care appear to lie with the deteriorating quality and effectiveness of public health services in many countries, often due in part of inadequate finance. The decline in the effectiveness of care also may disproportionately affect the poor.

The positive outcomes of the debate issue has a several yielded. First, the underlying principles, rational and modalities of increase public cost recovery. This is important because too much emphasis in the past have been placed on raising revenues and less on how cost recovery can contribute to improved efficiency equity, and sustainability of national health systems. Second, empirical assessments of the impact of the price, availability and quality of services on the demand for the medical care in Africa (Sub-Saharan) have been launched, shedding new light on prerequisites to successful cost recovery strategies. Third, as revenue accrues from user fees, households, providers of health care and donors are appropriately asking “ more revenue for what”. The cost and quality of health services have come under increasing scrutiny. Recent studies show that government expenditures on health care be allocated far more efficiently, offering the prospect of extending basic services to larger numbers of people in Africa

The empirical studies show that, the health care finance in Sub- Saharan Africa, with a focus on two mechanisms: increased user fees for health public health services and expansion of self-finance health insurance.

User fees are already the majors from of health finance in sub-Saharan Africa: private, out-of-pocket expenditures for health account for nearly half of total health expenditures. Government expenditures account for about 34 percent, financed through import duties, sales taxes, and income taxes. Donors and charitable contributions account for remaining 19 percent, most of which maintains capital or developmental budgets.

Self-financing health insurance is highlighted as well, because increased user fees for care may lead to unaffordable cost in the event of catastrophic illness or injury. Health insurance allows people to pool contribution to cover the treatment costs of those who experience low probability.

When combined user fees and self-finance health insurance can reinforce each other's contributions to sustainable health finance. User charges are stimulus to self-financing health insurance schemes. Countries cannot jump into self-finance health insurance schemes without first passing the hurdle of imposing user fee in government facilities, especially hospital.

## **2.2. COST RECOVERY**

There are many studies on cost recovery, the result that they got from the cost recovery calculation are deferent cost ratio.

- Self-financing health insurance to cover catastrophic illness and major medical bills associated with such illness However, aside from symbolic sledges of support of such reform, progress have been slow in most countries.
- Private out-of-pocket expenses account for more than 40% of total health expenditures while government expenditures account for 37% finance through imports, sales and income taxes. Most donors funding goes to capital development budget rather than to finance recurrent operating expenses such as salary, drugs, equipment and maintenance. This underscores the importance of shifting revenue collection and retention to the lower levels of health care services delivery.

There are twenty-seven Sub-Saharan Africa countries with some kind of national system of user fees in place. These included Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Zambia, and Zimbabwe. About one third of revenue mobilization as primary objective, the remaining two- thirds emphasize improvements in primary health services such as staff incentives or drugs availability, as a primary objective of user fees. Many countries in this group particularly the Francophone

countries participate in the “Bamako initiative. A major objective of the Bamako initiative is to employ cost- sharing to improve primary health care services.

Cost recovery in public health facilities in Sub-Saharan, The contribution of user fees to government revenue is summarized as in the table below:

Country	Average Revenue as a percentage of Recur -rent Government expenditures on Health (%)	Country	Average Revenue as a percentage of Recur -rent Government expenditures on Health (%)
Botswana		Lesotho	
- 1979	1.3	- 1984	5.7
- 1983	2.8	- 1991/92	9.0
Burkina Faso		Mali	
- 1981	0.5	- 1986	2.7
Burundi		Mauritania	
- 1982	4.0	- 1986	2.7
Cote d'Ivoire		Mozambique	
- 1986	3.1	- 1985	8.0
- 1993	7.2	Rwanda	
Ethiopia		- 1984	7.0
- 1982	12.0	Senegal	
- mid 1980's	15.0-20.0	- 1986	4.7
Ghana		Swaziland	
- 1984	5.2	- 1984	2.1
- 1987	12.1	Zimbabwe	
Kenya		- 1986	2.2
- 1984	2.0	- 1991 / 92	3.5
Malawi			
- 1983	3.3		

Source: Derived from Nalan and Turbat (1993) and World Bank population, Health and Nutrition Sectors Reports.

First impressions are that revenue from user fees represents a small, if not insignificant, share of government recurrent expenditures on health. However, performance appears to improve over time, as have been the case in Côte d'Ivoire, Ethiopia, Lesotho, and Zimbabwe. When fees were introduced in these countries, charges for services were very low, and revenue amounted to only 2-12 percent of government expenditures. Over time, however, revenue has risen to between 4 and 20 percent.

Bitran et al (1993), studied in Senegal which adopted the Bamako Initiative in 1991 to help pay for pharmaceutical products through user fees. A nationally representative sample revealed that the contribution of user fee to public health facilities ranged from 5 to 11 percent of hospital funding; 8 to 23 percent of health center funding; 14 to 35 percent of health post funding; and 87 percent, on average, of health hut funding.

In Benin, community contributions through user fees have consistently contributed between 42 and 46 percent of the overall operating cost of the first 44-health centers participating in the Bamako Initiative. In Guinea, the community contributions have been between 38 and 49 percent of operating cost of the first 14 participating health centers. In the Gabu Region of Guinea – Bissau communities have been able to contribute 39 percent of the running costs, equivalent to 87 percent of drug cost of health units. This study has done by UNICEF (1992).

The potential of user fees in Central Africa Republic. Cost recovery rate range 110-138 percent of recurrent cost in one group (excluding salaries), to 5 to 75 percent in another group, Central Africa Republic, (1992).

Lesotho, between 1991-93, user fees presented only 45-53 percent of the operating costs of Queen Elizabeth II hospital, a government operated central hospital located in capital city. This is considerably less than 13-22 percent collected by public operated, district-based in health services (district hospital and health centers).

In Ethiopia, user fees represented 23 percent of the operating cost of teen rural public hospitals and 32 percent in eight urban public hospitals.

Mc Innis (1993), studies in the Central Africa Republic, 4 regional and 5 prefectural hospitals recovered 45 and 26 percent of operating cost (excluding salaries and drugs), respectively. Two maternities covered upwards of 80 percent of such operating costs.

Kutzin and Wouters (1994), review of different sources of evidence from Africa, find a range of cost recovery in non-governmental organization of between 25% and 50% of total expenditure-substantially higher than the averages for comparable government facilities.

In a number of recent studies, particularly in the context of appraising Bamako Initiative schemes, and for drugs revolving funds, attention has been given to financial sustainability from local sources.

Shepard et al (1986-1988), study of the Bwananda District in showed that, user fees account for 109 to 111 percent of the operating cost of the health centers between 1996-1998. In Bwananda Hospital, between 1996 and 1988, the cost recovery of operating expenses covered by user fees was 24 -30 percent. The fees were supplemented by insurance payment, which accounted for 22-23 percent of operating costs, and employer buildings, which account for another 13 – 22 percent. The revenues from cost sharing at this tertiary level, therefore ranged between 59 percent and 75 percent of total operating cost between 1886 and 1888.

World Bank (1996), have been discuss on Bwananda district – based scheme in Zaire is particularly instructive because of it high rates, high premium levels and financial efficiency. The population believes that the scheme provides them with access to high quality health services. As hospital fee are relatively high, there is a real financial risk with a disease requiring hospitalization. The bulk of the population can afford the premiums even though the rates are increase every year to keep pace with inflation. Finally, the revenue from premiums and co-payments in the zone are used to finance the operating cost of the local facilities. All hospital cost for beneficiaries were covered by income from premiums over the 1987 – 1988 period

and cost recovery in the district hospital jumped from 48 percent in 1985 (before insurance system was introduced) to 79 percent in 1988.

World Bank (1996), have been discuss on China, the revenue can recovers about 90-97 percent of hospital costs from user fees and more than 80 percent for all health facilities combined. China's per capita GDP of \$ 370 in 1991 is almost identical to the average for Sub-Saharan Africa for \$ 350.

Wim Van Dam et al (2001), they were studies on “ Sonikum New Deal ” in Sonikum District, Siem Reap Province, Cambodia, the meaning of this project is better income for health staff; better services to the population. The Sonikum referral hospital, with 17 health centers was introduced the user fees since the beginning of the year 2000. The first year implemented, the average user fees accounted for 6% of operating cost of the hold operational district (Operational district, Referral hospital, and health centers). The fees collected by the hospital accounted for 15% of operating cost of the hospital. The sources of income of the hospital are 65% from government contribution, 20% from donors (MSF & UNICEF), and 15% from the patient fees. The fees collected by the health centers cover about 18%. The sources of the income of the health centers are 49% donor's contribution (MSF & UNICEF), 33% government supported, and 18% community participation (User fees).

Harvoravongchai et al. (1999) study on cost recovery of Magnetic Resonance Imagine (MRI) and found that the average cost recovery in public hospital was 0.41, in private hospital 0.49, and private center 0.71. In the whole pictures, the hospital could not cover the cost that they invested to provide the services.

Ngamsiriudom, Bovorn, Tipaporn Satiensakpong, and Sarunya Ngamsiriudom, 1997. They were studied on Unit Cost and cost recovery Analysis of Chiangmai Marternal and Childrend Hospital. With integrated budgeting system made hospital account and finance rather complicated. Simultaneous equation method was applies for cost allocation

They found that total hospital cost was 36,915,876 baths. The proportion of labor cost to material cost to capital cost was 6: 3: 1, which was the same as other studies such as the study of Wibulpolprasert et al in 1989 (proportion was 5: 4: 1), but deferent from the studies of Pongprasert et al in 1987 (proportion was 36: 59: 5), and the studies of Public Health Planning Davison in 1980 proportion was 39: 49: 12.

They also compare unit cost amount similar activity such as amount clinic of OPD and amount patient wards. The highest unit cost of OPD was adult clinic, and the lowest was ANC (Antenatal Care) clinic. The highest unit cost of inpatient wards was special post partum ward and the lowest was newborn ward. Although the characteristic of each clinic of OPD was rather similar, but resources used for setting up each clinic and details in health care cost such as medical cost were deferent. So in dept analysis should be applies for comparing efficiency amount hospitals.

Cost recovery analysis was studied for cost recovery of each cost center in three dimension; total cost recovery, recurrent or operating cost recovery, and material or non-labor operating cost recovery. Revenue of each cost center was collected by investigate in each prescription and then compare to the cost. They found that amount OPD clinic, the highest operating cost recovery was dental clinic (198.73 percent), and the lowest was well child clinic (55.33 percent). Total cost recoveries of OPD, IPD and total hospital were 36.57, 22.82, and 26.57 percent consecutively. Operating cost recovery were 40.95, 25.26, and 29.52 percent, and material cost recovery were 137.8, 82.13, and 97.21 percent consecutively.

The results of this study were rather deferent to the real situation because government had supported some budgets for capital, labor and material cost. This study didn't include this budget as hospital revenue. If they had added the budget supported from the government, the hospital cost recovery would have been more than 97.21 percent.



### 2.3. COST RECOVERY POTENTIAL

Cost recovery is the ratio revenue to cost,  $CRR = \text{Revenue} / \text{Cost}$ . To ensure cost recovery of the facilities, it must be the total cost equal to total revenue, the point that hospital revenue equal to cost or zero profit is Break-even point.

Cost recovery potential is the capacity to generate revenue. In this study we will analyze/calculate cost recovery, estimate the total cost and total revenue, then the unit cost of each patient services cost centers, and then to estimate the potential cost recovery of the hospital by sensitivity analysis. We assume that quality of health care services will not change, the growth rate population, price elasticity are constant, but the quantities of demand, and the revenue will be change, if the prices of the services are changes.

The above analysis/calculation will show the effect of price change (Increase), and the relationship between price, the revenue, the demand, and the poor exempted.