CHAPTER 3

HEALTH CARE SYSTEM IN CAMBODIA

3.1. Indicators on demography, economics and education in Cambodia

Cambodia has a total population of 12.2 million with a current growth rate of 2.3%. Cambodia has a total surface of 181,035 square kilometers, with just 4,165 km of paved roads often in poor state of repair. Urbanization has risen to 22% of the population.

The GDP was 3 billion USD in 2000, with a GNP per capita estimated between $310 per year. Recently the World Bank sees promising signs for the economy, with a growth of 5% in 1999, a fairly stable exchange rate and inflation coming down steadily. External debt, at 78% of the GDP, is growing rapidly (UNDP Global Human Development Report, 2000; US Census Bureau website, 2000; World Bank website, 2000).

Defense has absorbed a large proportion of government resources, crowding out much-needed expenditures on health and education. Now that peace has been restored, the government plans to downsize the military by one-third by 2003. The following table shows the budgeted expenditures per sector, from 1996 to 1998

Moreover, there are growing discrepancies between the planned or budgeted spending, and the actual expenditures, with continuous overspending on defense and failing to spend the planned budget for health.

Table 3.1: Actual expenditures, as % of planned expenditures (1994-1997)

Year	1994	1995	1996	1997
Defense and security	204%	177%	123%	132%
Education	84%	155%	99%	33%
Health	61%	66%	72%	46%

(Source: Ministry of Planning, 2000, Cambodian)

Nevertheless, the absolute size of the health budget has been increasing continuously over the last years. The health budget grew from about 15 million USD in 1994 to about 24 million USD in 1996, and to 37 million USD in 2001. However, there have been major problems in budget mobilization. Three main sources contribute to Cambodian health care financing public, donor/lending agencies and out-of-pocket funds from household. It is estimated that in 1999 national health expenditure per capita in Cambodia per year was about US$ 20. Of this amount the government (Ministry of Health budget) spent approximately 10%. Donors took up about 20 %, while household accounted for the remaining 70%.

In recent years, government budget for running cost devoted to health ministry has improved dramatically. The per capita budget increased from US $ 1.84 in 1997 to US$ 1.93 in 1999 and 2.7 in 2000 and up to around US$ 3 in 2001. However, the overall actual expenditure has been limited, averaging 75 % of total budget from 1996 to 2000; and the percentage of actual spending at provincial level is lower than that at central level.

Table 3. 2: National Health budget and Related Statistics 1996-2001

Year	1996	1997	1998	1999	2000	2001
Population	10.700,000	11,000,000	11,300,000	11,600,000	11,900,000	12,185,600
GDP per capita	$ 291.73	275.75	263.10	311.00	344	283.52
Exchange rate Riel/US$	2,643	3000	3,700	3,790	3,800	3,800
Health budget in-million US$ (recurrent cost)	$ 22.85	$ 20.25	$ 17.82	$ 21.10	$ 31.8	$ 37.4
Health budget per capita in US$	$ 2.14	$ 1.84	$ 1.58	$ 1.82	$ 2.7	$ 3.1
% Of nominal GDP in US$	0.63%	0.67%	0.60%	0.67%	0.9%	10.0%
% Of total government budget	6.1%	6.0%	6.3%	7.28%	9.2%	10.0%

(Source: National budget book 2001, Ministry of Health, Cambodia)

Health care situation in Cambodia

Along the socialist inspiration of the era, health care was to be provided to the population 'for free' by the government. However, health staff was on extremely small government salaries. To this day, the salaries have not been adjusted and are grossly inadequate to sustain basic living conditions. A typical government salary is around 10 to 15 USD per month, while an estimated 100 USD is required for a family to live in a town. This situation understandably forces staff to develop 'creative coping'. In reality this leads to disastrous consequences for the affordability of health care.

The government assumed responsibility, as up to present times, to provide all necessary medicines to every health facility, to be distributed to patients free of charge. The donations of medicines were irregular and insufficient, leading to frequent shortages. From this idealistic but unsustainable commitment grew a public health service that is generally of poor quality and high cost for patients, leading to low utilization and gross inequity between income groups in regards to accessibility. The slogan 'free health care for all' veils an unachieved aim. In 1997 a survey showed that nationwide only 8% of admitted patients paid no fees in the hospital, with the richest most likely to be exempted. Only 3.5% of the poorest did not pay fees when admitted, and 45% of them paid nothing for drugs (that are actually supplied by the government and are supposed to be provided to patients for free).

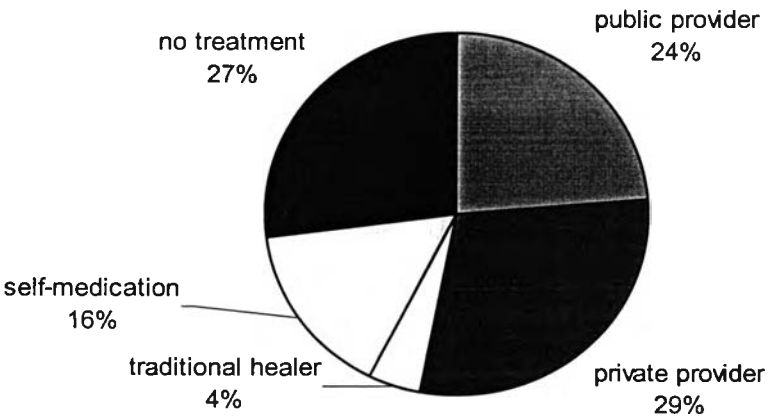
The tiny wages of health staff resulted in low motivation, absenteeism, and the common illegal practice of selling government drugs, charging unofficial 'under-the-table' fees and seeking rent for hospital beds. As a result, many health care staff were primarily motivated by pursuing personal profit rather than providing quality care, which resulted in a neglect of primary health care and preventive care. Tasks that do not generate benefit, such as hospital hygiene, were often not performed. Unofficial charges were not recuperated in the public health system, but led to unequal extra income for hospital staff; depending on the hospital service they worked in, the position of the individual staff, and indeed their skills to manipulate the system (Brun & Pelletier, 1998). De facto, informal resources were tolerated to complement the low

salaries. Now a day, legislation allows government staff to be active in private practices. Sometimes this leads to luring patients from public facilities to purchase drugs in private outlets and to seek private health services.

In the former health system, financing of the health facility depended on central government budgeting, with cash provisions to cover salaries and running costs, and donations of drugs to be distributed. In 1997 Cambodian household survey estimates the annual contact rate at 0.39 per capita. When including contacts with private providers and drug vendors, the annual contact rate is estimated at 1.2. Moreover, 27% of Cambodians who were ill during the month before the survey did not seek medical help or self-medication and just 24% sought care from a public provider (Cambodian Ministry of Planning, 2000).

The pie chart below, in Figure 1, shows the choice of health care provider by people nationwide. As income increases, there is a marked shift towards private providers and a small increase in use of public providers, with an overall shift away from self-medication and away from non-treatment.

Fig.1: Choice of health care provider in Cambodia nationwide
(% of people ill last month), based on data from Cambodian Ministry of Planning, 2000



High cost of health services, low household incomes, limited education, unreliable services and inadequate access to health facilities and to health personnel result in a lack of confidence of the population, and are important factors in explaining the low utilization of health services by the poor Cambodians. For a visit to a health care provider in 1997 the patient paid on average US$ 30. An episode of hospitalization was priced two to four times as much. One outpatient visit to a Commune Clinic or District Hospital would cost US$ 21, or use up half of all non-food spending, which is US$ 38 per capita per year for someone in the poorest quintile. Self-medication, used extensively by the poor, is generally the cheapest option, costing an average of US$ 10. Nationwide, inpatient admission costs an average of US$ 119 for a public hospital and US$ 122 for a private hospital, where generally less severe patients are admitted (Cambodian Ministry of Planning, 2000).

A breakdown of expenditure on health care prior to 1997 shows that unofficial fees account for the major share of health expenses or 61%, drugs account for 34% and transport for 5%. Surprisingly, this is even true for the outpatient services purchased by the poorest quintile at community clinics. Unofficial collection of user fees thus makes PHC unaffordable for most. Nationwide, 10.3% of total household consumption expenditure is devoted to medical care, and even 11.8% in rural Cambodia. It is acknowledged that medical expenses are a major cause of landlessness in Cambodia. As for the fee-exemption system prior to 1997, the household survey shows that wealthy users are much more likely to benefit from exemption than the poorest ones, at all levels of public health services. Further assessment reveals that most exemptions granted by public providers are to patients who are politically important or well connected in the village. In 1997, less than 1% of the poorest were exempted from user fees at commune clinics or district hospitals, and non were exempted from inpatient fees at public hospitals (Cambodian Ministry of Planning, 2000).

The Ministry of Health initiated profound changes with the Health Sector Reform, in the mild 1990's. A summary of the reform strategy is given in paragraph 1.3 a National Charter on Health Financing that was issued in February 1996. For a

summary of the Charter, refer to Box 1. A Health Financing Task Force was created at ministerial level, to address policy issues and new questions arising from the reform in health financing.

Box 1: National Charter on Health Financing, Ministry of Health, No 296, February 1996.

Aim: to extend quality basic services at better price, by increasing resources of health facilities

Objective:

To create a policy framework in which health financing schemes (HFS) can be tested, monitored, evaluated and approved, revealing methods of best practice

To include aspects of private sector mechanisms into the functioning of public health services

To ensure minimum standards, taking into account equity in health care

Major strategic points:

The MoH will guarantee adequate funding from the national budget, and not interpret user fees as a substitute for government funds. The MoH and PHD will match the financial contributions of the population.

Collected funds are to be managed in the health facility where they are generated

Guidelines for Health Financing Schemes:

The MoH demands that proposals for HFS should be submitted for approval to the Health Economics Sub-committee of the Co-coordinating Committee, and that the HFS is in accordance with the Health Coverage Plan. A series of quality requirements are further stipulated. Management of the HFS must be systematic, transparent, accountable, involving the community and subjected to monitoring and evaluation. A system of exemptions for the poor and vulnerable must be included.

Community participation consists of financial contribution and involvement in decision-making, management of funds and evaluation. Community consultation meetings must be held and accounts must be discussed with the community.

User fees must exclude any other form of payment. Revenue of user fees can be used

after community consultation and a costing plan, to fund user needs, to purchase drugs, and for staff incentives. Performance related the Management Committee, on basis of workload and quality of work must determine bonuses. The HFS Management Committee must decide, together with users, what system of user fees will be developed, keeping in mind equity in access, continuity of services and efficient health care.

To stimulate the development of a functional referral system, lower user fees should apply at the first level, with incentives for referring patients.

The Provincial Health Department (PHD), Operational District (OD) office and public providers get autonomy to manage the budget and activities, with the option to sign contracts for operating services (contracting-in/out).

The MoH will develop standards and legislation, while the PHD, as commissioner, must improve the regulation of health services. The MoH and the PHD has the responsibility to monitor and evaluate the HFS's, paying regular visits and establishing indicators of quality of care, utilization and financial performance. Periodic evaluation reports will be shared with the community.

Health Sector Reform & Health Infrastructure

The rehabilitation of the health sector, as Cambodia enters a period of relative stability and donor support, has created an opportunity, despite a resource constraint, for the Ministry of Health (MoH) to develop a more effective role in the provision and regulation of health services. The MoH has started reforming the health sector since 1995. The Reform consists of a process of carefully managed change under the guidance of the overall public administrative reform program. The health care system reform focuses on three main components: organizational structure, human resource development and finance. The process is based on fundamental principles of equity and improved access to health care for all population. The change requires a redefinition of roles, functions of each level of health care system, and a health financing policy to improve access and equity of services for the poor. It also requires

the de-concentration of authorities and responsibilities from higher level to district health managers.

Prior to 1995 the Government Policy was for one infirmary to serve one administrative commune and one hospital to serve every district and every province. The allocation of health facilities, staff, medicines and budget was therefore determined by administrative criteria. As there are districts in Cambodia, which are more heavily populated than some provinces this has resulted in inefficient allocation of resources.

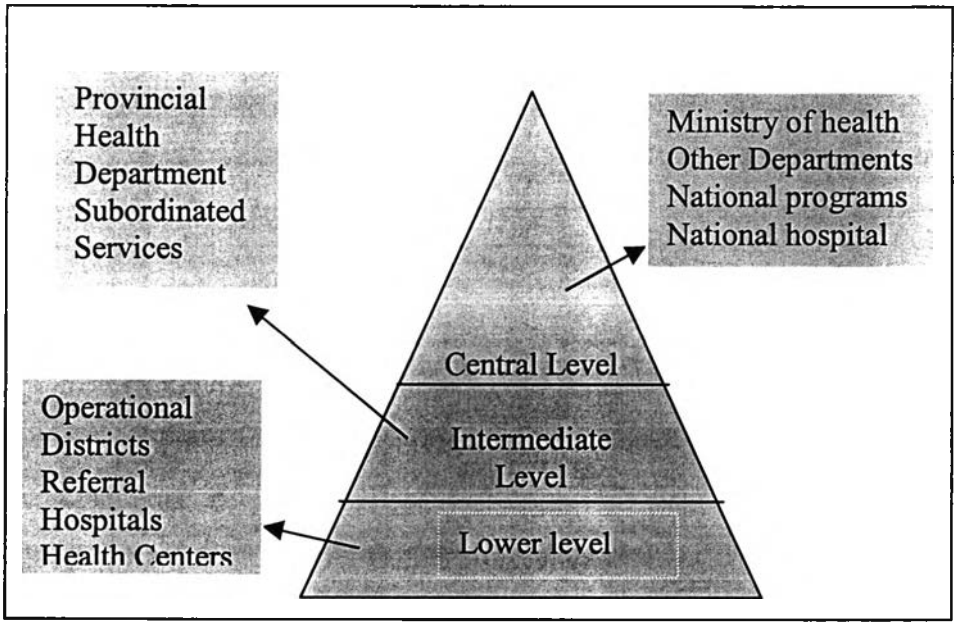
Until 1995 the national health system was organized into four levels: central, provincial, district and commune. At all levels, the physical condition of the health infrastructures was poor. The central level consisted of the MoH Headquarters, two training institutions, four national institutes, one drug factory and eight national hospitals. The provincial level consisted of 22 provincial health departments and 22 provincial hospitals. There were four Regional nursing schools located in four provinces. The district level consisted of district health offices and 164 district hospitals. At commune level existed 1,267 commune clinics.

In 1995 the MoH approved a new health system, health sector reform, for the organization of health services based upon a redefinition of the criteria for location of health facilities together with a definition of a basic minimum services package to be offered at each level. The system was supported by a plan entitled the health coverage plan (HCP), which was based upon geographical accessibility and population size criteria. The new health system is divided into three levels: central, provincial and operational district. Each operational district is a decentralized unit containing an operational district office, a referral hospital and about 13 health centers on average. The number of administrative districts (AD) covered by an Operational District (OD) varies according to the size of the population, for instance, an OD can cover only one AD, one and a half or even four or five ADs. For health center the service package is called Minimum Package of Activities (MPA), as for the referral hospital it is Complementary Package of Activities (CPA). In principle, a referral hospital should serve a population of 100,000-200,000 people and each health center should cover about 10,000 inhabitants.

Nationwide, it was planned to have 73 operational districts (OD) with 67 referral hospitals (excluding national hospitals) and 929 health centers. It should be noted that six OD do not have their own Referral Hospital (RH); they use national hospitals as their RHs. In low population density provinces health posts are added to health centers.

As of September 2000, at central level there were the MoH Headquarters with nine departments; two training institutions; two national institutes, seven national centers, and eight national hospitals with 1890 beds. The provincial level consisted of 24 provincial health departments and four regional training schools. The district level consisted of 73 Operational Districts (OD) with 66 Referral Hospitals (RH) under different stage of development towards providing full CPA, which encompassed 24 provincial hospitals; 113 former district hospitals, 565 health centers and 433 commune clinics.

Fig 2: Three level of Health System in Cambodia



(Overall in Cambodia, there are 24 cities-provinces and 67 Operational Districts (mean 3.2 OD's per province, median 3), with an average population of about 143,000 per O.D. (minimum 26,000; maximum 252,000).

3. 2 Takeo province:

Takeo province lies in the South of Cambodia. Takeo provincial town is 78 km from the Phnom Penh Capital City, or 2 hours by car.

General information:

Takeo province had a total population of 811,732, living in ten administrative districts, 99 of communes, and 1,117 villages. Most of the populations earn livings as agriculture.

Health facilities information:

Under health sector reform (health coverage plan), Takeo province has 5 Operational Districts, 5 Referral hospital, and 70 Health centers

Table 3.3: Operational Districts and Population under catchment area:

	Administration Districts	Operational Districts	Number of Referral Hospital	Number of Health Center	Population Under catchments area
1	Daun Keo	Daun Keo	Takeo hospital 1	15	180,678.00
2	Treang				
3	Samrong				
4	Tramkak				
5	Bati	Bati	1	13	171,477.00
6	Prey Kabas	Prey Kabass	1	13	146,412.00
7	Angkor Borei	Ang Rokar	1	9	110,907.00
8	Borei Chulsar				
9	Kirivong	Kirivong	1	20	202,258.00
10	Koh Andeth				
	Total		**5**	**70**	**811,732.00**

(Source: Department of Planning and Health Information, MoH, Cambodia)

3. 3 Takeo Hospital

3.3.1.Takeo Provincial Hospital up to 1997

Before 1996 Takeo hospital is the provincial hospital, after Health Sector Reform 1996 Takeo provincial hospital has been change under Daun Keo Operational District (District locate in the central province) call "Takeo Referral Hospital". The total populations under catchment area of Takeo hospital are 180, 678.00, and have 15 health centers.

Following the fall of the Khmer Rouge regime, Czechoslovakia offered development assistance during five years.

After withdrawal of Czechoslovakian support, Swiss Red Cross maintained technical medical assistance during 12 years, from late 1986 to 1996. More than 30 expatriates intervened in Takeo provincial hospital under the development projects of Swiss Red Cross, some of them staying for a few months, but eight of them giving assistance for more than two years and one surgeon staying for six years. The 34 expatriates included three surgeons, 17 medical doctors and 10 nurses or midwife. In a period of ten years, these expatriates contributed approximately 402 months of technical assistance, including 160 months by medical doctors, 100 months by surgeons and 97 months by nurses, mainly anesthesia nurses.

By 1996 Swiss Red Cross re-evaluated its commitment and decided to withdraw its support. A decade of thorough training had resulted in good technical progress especially with regards to surgical services. The hospital built up a reputation. The level of hospital activity and staff motivation was already amongst the highest of a small group of provincial hospitals in Cambodia. Although Takeo Hospital functioned reasonably well, persistent concern remained regarding access and equity, as well as continued problems of misappropriation of resources and bribing of patients. Despite the fact that this unsatisfactory status quo was accepted, resentment existed, especially amongst senior health personnel who expressed the

desire to look for alternative ways to under-the-table payments and other 'creative coping mechanisms'.

The National Charter on Health Financing (see Box 1) generated new hopes and offered guidelines for a new approach towards consistent management of hospital resources. In this context, and after a process summarized in Box 2, Swiss Red Cross decided to support the new HFS initiative for a limited period of three years, as the final step in phasing-out its assistance to Takeo Hospital.

Box 2: Logical sequence of events leading to the implementation of the HFS

Building up on the quality of services.

Legal framework and some guidance from central level

Reaching a critical mass of willingness to challenge the unsatisfactory status quo amongst the hospital personnel.

Self-identification of functional problems with the support of a trusted facilitator. Also trusted external mitigation proved necessary to resolve individual conflicts originated from the lack of transparency of the former system.

Consensual commitment of the staff members to participate in structural reform. This grass-roots willingness for change was essential. Further more it was structured in the form of a Management Committee whom members were elected amongst the different categories of personnel

Data collection including user's side information.

Design of the scheme with crosschecking for feasibility.

Produce the necessary management tools and accounting system.

Organize the control and supervision procedures including regular financial auditing

Recognition of the scheme by the authorities, the staff, and the community.

The inception phase could then start.

3.3.2 Activities and financial system before the HFS

Two sources of information are available to assess the level of activity and the financial balance in Takeo Hospital prior to 1997. The official figures often inflate the activity as the supply of drugs was based on this information. Financial information is not reliable. Then, the feasibility study conducted at the end of 1996 compiled a revised set of data from the sources and indeed found substantial differences. Also, unofficial revenues of the staff were estimated by in-depth interviews.

Human resources of Takeo Hospital:

Officially 192 staff on the payroll

In reality 172 staff employed

Estimated 145 full-time staff requires

Activity of Takeo Hospital in 1996, Average per month.

Activity/month	Official figures
OPD General consultation	1,074
OPD Specialist consultations	89
Number of admissions	359
Surgical interventions	105

Utilization rates per year:

For Takeo province area (pop. 791,171):

OPD general + specialist consultations: 10.7 per 1,000 populations

All admissions: 3.8 per 1,000 inhabitants.

For the area covering 4 administrative districts related to Daun Keo (pop. 383):

OPD general + specialist consultations: 19.7 per 1,000 populations

All admissions: 8.9 per 1,000 inhabitants.

Reasons for this low utilization can be:

Physicals access and cost of transport:

5 remote districts = 36% of population

2 districts with easier access to Phnom Penh = 25% of population

3 districts with easier access to Vietnam = 15% of population

Cultural accessibility as farmers from remote villages are organized on self-reliance for most of their basic needs.

Financial accessibility: high and unpredictable cost of health care in public hospital, in addition to transport costs and costs of live in town.

Quality of health care linked to unofficial payments.

Competition of private sector, population has low confidence in public services

The unofficial fees for services delivered, were not fixed but variable, and were estimated representing up to 80% of the staff income, with big differences between staff members. Patients did not pay a global fee, but paid for each performance to individual staff:

- General OPD consultation: US$1.5 the price of medicines which had to be purchased mostly in private pharmacies.
- Specialized consultations had a big variation in price
- Diagnostic support: 1 to US$ 5
- IPD admission: 15 to US$ 30 + the price of medicines and other bribes.
- Surgical interventions: 40 to US$ 100 + the price of admission

Surgical cases were estimated to produce 47% of the income from unofficial fees.

Therefore, the financing of the hospital before 1997 consisted of:

- Government salaries, rating 10 to US$ 15, often paid late, amounting US$ 2,500 per month in the hospital.
- Government budget for Takeo Hospital in 1996 was US$ 40,000 of which only 60% was accessed to, or US$ 24,000 on year basis.

From 1997 onwards, the government budget was partly linked to the hospital activity.

- Drugs supplied by Central Medical Store (CMS): US$ 40,000 in 1996
- Drugs supplied by Swiss Red Cross: US$ 108,000 in 1996
- Estimated unofficial out-of-pocket payments totaling US$ 13,750 per month, with total absence of transparency.

Estimated monthly income of Takeo hospital, in US$ (approximate figures, data from feasibility study):

- Salaries	2,500.00
- Government budget	2,000.00

- CMS drug supply (average)	3,333.00
- SRC drug supply	9,000.00
Total:	16,833.00

In addition to this, an estimated amount of US$ 13,750 unofficial fees were collected from patients and not recorded. This brings the theoretic monthly average budget of the hospital to a total of US$ 34,583.

Functional analysis of the health services, before 1997

This chapter presents a brief functional analysis of the health system in Cambodia with a focus on Takeo provincial hospital. The situation in Takeo Hospital was substantially better in terms of quality of care than most equivalent hospital in the country.

For the situation in Takeo in particular, the identification of problems in this functional analysis is based on:

- The analysis made by the Takeo Hospital HFS Management Committee, during months of preparatory discussions
- Interviews with users
- The Swiss Red Cross socio-economic survey in Takeo, August 1996 and feasibility study December 1996, records by Swiss Red Cross (during ten years of technical assistance).

The functional analysis will attempt to identify key factors with potential to favor or to hinder the process of accessing available resources and converting them into services of acceptable quality that answer the need of the population.

- An initial factor is the volume of resources theoretically available to the health facility. Before the reform, government resources complemented by possible external assistance, both in cash or in kind, are the only inputs in health facilities. User fees although in practice were not recorded.
- A second stage is the flow of these resources, or the access to the resources. That Government funds are often slow to mobilize delayed in transfer and unpredictable. Along the channels from Ministries, to provincial treasury, to PHD, to OD, to the

health facility and then to its expected allocation, misappropriation or misuse are challenging the

- Then at a later stage, flexibility in the use of these resources by the facility can be promoted or adversely affected by legislation, slow decentralization or indistinctness of specific rules concerning management of funds. Here too external decisions have their effect on internal functioning of the health facility.
- A fourth stage is the conversion of acquired resources into health services of acceptable quality. This requires good and rational management. Transparency and accountability are indispensable for staff and health leaders to function optimally and with confidence in the organization. Regulations must be clear, widely understood and enforced. Before user fees or staff bonuses can be introduced, there has to be a certain level of quality of care and good functioning, which was the case in Takeo Hospital.

Firstly, a description of some functional problems as encountered before the financing reform in the public health facilities in Cambodia in general. This will be followed by a summary of weaknesses and strengths in Takeo hospital, where the basic conditions differed from the average Cambodian hospital. The prevailing attitude in other public facilities is relevant, as it represents a general context in which Takeo Hospital is functioning. Functional flaws in the public health care providers include:

- Bribery, as salaries does not cover household expenditure on the most basic needs. Staff members collect unofficial fees for medical acts, drugs and consumable items. There is no system of sanctions to counter these practices. Unofficial out-of-pocket payments are widespread and tolerated, but result in raising the cost of services, and the dissatisfaction of the users.
- The mentality of the staff does not promote quality of care. There is no strong collective goal to improve case management and the health status of the population. The mentality of the health staff is often characterized by individualism, with each staff member seeking to profit financially from a patient. This is challenging the concept of hospital team.

The average public health facility had constant problems with staff absenteeism, supplies of essential drugs running out of stock and poor equipment. Organization of

the health facility was in general poorly managed. Peoples' confidence in public services was limited.

- Health personnel of the public sector are also the main owners of the growing private health sector, thus reducing their motivation to improve the public service. In fact, embezzlement of drugs and even medical equipment of the public sector for private use and benefit was not uncommon.

During the analysis of the functioning of Takeo Hospital in 1996, the Management Committee identified a series of 'internal' problems, but also recognized strengths that could support change:

- Payment for services and income for staff: unofficial out-of-pocket payments and unethical practices were common also in Takeo hospital, providing substantial income for some key staff, but leaving most staff with very meager earnings. This was identified as the key issue that hindered improvement of quality of care and financial accessibility. The majority of staff expressed dissatisfaction about this situation and a desire for change.
- In contrast with the other equivalent hospitals, Takeo Hospital had already a reasonable level of quality, acknowledged by the users. This showed in the volume of activity, especially in surgical cases. The staff of Takeo hospital was also prepared to increase the number of patients treated and therefore to handle a higher workload.
- After more than a decade of external technical support, medical and managerial capacity in Takeo Hospital attained a valuable level. Especially a handful of senior staff members were committed to lead the changes.

However, Takeo Hospital could not start a HFS on its own, and desired external support in order to:

- Help building consensus between staff, some of whom were to loose or gain with the new scheme
- Bring in financial skills to design the HFS
- Implement a re-organization of the hospital, including rationalization of staff numbers
- Link with and engage national and provincial health authorities, and
- Fund the budgetary shortfall during the transitional period

3.3.3 Intervention, Objectives and Strategic of the Hospital Financing Scheme.

A. Aim and objectives of the Hospital Financing Scheme (HFS)

1) Aims of the Hospital Financing Approach

To develop, along the guidelines of the Ministry of Health, an innovative hospital financing approach integrating the issues of staff income and quality of service against fair financial contribution of the beneficiaries in a sustainable scheme

2) Objectives of the Hospital Financing Scheme

The primary objective is to establish a financial system in which government inputs complemented by the revenue from users would cover the recurrent costs of the hospital, including salary supplements for its personnel. As part of this, the management of resources should become more rational and transparent. The hospital must work towards greater managerial autonomy while government inputs should increase to the level of sustainability of the system.

A secondary objective is the improvement of the quality of care that salary supplements included in the financing scheme are expected to substantially enhance. To increase accessibility is also a secondary objective for which financial and managerial arrangements are included in the financing scheme. This comprises provision for free of charge services for the poorest section of the users.

Then, and since such system was innovative in Cambodia, it was expected to generate lessons and tools of interest for further health financing development in the country.

The Ministry of Health advocates that successful financing schemes require improved health services, accommodation of the poorest patients, community involvement, efficient and transparent management, close monitoring and evaluation (MoH, Department of Planning and Health Information, 1997).

B. Development strategy for the Hospital Financing Scheme

The pilot Hospital Financing Scheme attempts to address difficulties and undesirable practices stemming from the current public health system combined with the prevalent situation of the rural population.

The project was build upon financial and managerial provisions and arrangements, as a strategy to allow a rational and cost-effective functioning of the hospital. It was expected that a synergic effect would take place between the motivation of the hospital staff and the attractiveness of the services with fixed fees, their quality, and the volume of activity reflecting on the hospital revenue. It was foreseen that a paramount fold of a Hospital Financing Scheme is behavioral: motivation of staff and professional discipline is unavoidable and requires a genuine consensual commitment of the hospital team as a whole. Another prerequisite is the commitment of the hierarchical structure to support the principles of the system and to ease the flow of resources the hospital is entitled to.
Strategic points for the Hospital Financing Scheme:

- Decentralization provides the local administrative and managerial structures with means and responsibility on which they can make commitments. Indirectly, it also provides the hospital with higher managerial autonomy. The National Charter on Health Financing provides a legal context, a loose framework in which a scheme can be designed and grant a 99% retention of revenues.

- The creation of a Management Committee for the Hospital Financing Scheme happen to be crucial in providing guidance and in securing the involvement and adhesion of the stakeholders during the development of the pilot scheme. The Management Committee is a broad forum for identification and analysis of problems, discussion, group decision-making on strategies, monitoring and evaluation of the pilot scheme. The Management Committee is responsible for the daily rational

management of the hospital budget and other resources. The Committee must advocate an increase in government input, substantiated by evidence of increased hospital activity. To ensure confidence of staff in the management of resources, Committee members representing the hospital are elected among each category of personnel.

- Contractual agreements at two levels seal the respective commitments: (a) in terms of behavior against salary supplement between each staff members and the Management Committee and (b) in terms of financial and managerial arrangements between the involved institutions.

- Introduction of performance related bonuses (PRB): link the income of the hospital staff with their performance, while strictly eliminating bribing of patients. The aim of the PRB is to allow the hospital staff to receive a live able income from their duty in the public service, the more if the volume of activity increases and if they individually perform well.

- Introduction of user fees: a fixed, transparent and uncomplicated fee system.

The main aim of introducing user fees is to rationalize and record hospital revenue. It was estimated that a tailored fee policy could permit a reduction the out-of-pocket payments compensated by a higher volume of paying users: more affordable and better quality health care should attract more patients.

- Avoiding economic exclusion, by providing the poor and vulnerable segments of the users with a fee exemption system. The exemption system must be transparent and non-arbitrary. Exemption can be partial or complete, and is decided after an interview assessing criteria for poverty. An equity fund should be established, to cover the cost of medical care for the poorest ones, as the hospital does not receive any specific fund for this purpose.

- Demand creation or stimulation of the utilization of the hospital goes with a) the attractiveness of the offered services in terms of cost, quality and reliability and with

b) information/education/communication on potential benefits expected from the offered services including the fee-exemption system. The development of the referral system is expected to play an important role in this latter fold.
The external support commits itself to "filling the financial gap" during the 3-year establishment phase, until inputs from government and user fees can come to a balanced budget.

The development strategies of the HFS address the key issues of volume of resources, flow of these resources, flexibility in the use of the resources, as well as rational and transparent use of the resources.
The above intervention strategies will now be elaborated further:

C. The HFS Management Committee and contracting with partners

1) Global contract between partners in introducing the Hospital Financing Scheme

A prerequisite for change is the willingness of all staff to strike a 'new deal'. A genuine dynamic must be present in the group, and in this pilot scheme, this was crystallized in the establishment of a Management Committee, elected by the personnel. The first ambition of this committee was to set the principles and elaborate the detailed provisions of the scheme. This resulted in a set of 10 booklets covering as much as it could be foreseen of the required managerial arrangements and a Global Contract focusing on the required financial commitments. Then, these founding documents established the conditions upon which the project could be implemented. Also they showed clearly that the actors and actual owners of the project were the staff of the hospital.

The initial Global Contract covered the 3-year period ending 17th of September 2000 and was later extended till December 2001. With this, the project received formal commitment for support from six signing institutions:
Ministry of Health
Governor Office of Takeo Province

Takeo Provincial Health Department

Takeo Hospital Director Office

Management Committee

Swiss Red Cross.

The signatories to the Global Contract agreed on the followings

Approval of the general concept of the project and of its founding principles.

The project objectives and its strategies

The special interest of this innovative approach and a subsequent special support

The acknowledgement of the Management Committee and of its managerial role

The respective responsibilities in monitoring and evaluating the project.

Each signing institution also made specific commitments with regards to the mobilization of resources as follows:

◆The Cambodian Ministry of Health

Financial contributions of the Ministry of Health are stipulated as:

Salaries of the hospital staff, as provided under Chapter 10 of the budget law.

Running costs of the Takeo Hospital, as provided under Chapter 11 of the budget law [1]. The Ministry of Health commits itself to transferring the budget under Chapter 11 in advance.

Sharing in the financial input, necessary to implement the Hospital Financing Scheme pilot project

R 74.3 million on the first year,

R 121.5 million on the second year,

R 159.3 million on the third year.

The Ministry commits to a smooth flow of funds that will be paid in advance and directly to Takeo Hospital via OD, under provisions of Chapter 13 of the budget

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[1] Methods for planning the running costs budget for health facilities are stipulated in the 'National accounting guidelines for the operational district, 1997'. For a Provincial Referral Hospital such as the Takeo Hospital, monthly government budget for running costs amount to RH 9 million (US$ 1 = R2, 700), plus an additional R10, 000 per admission and R1, 000 per out-patient consultation, to compensate for the volume of activity.

Chapter 10 of the budget law: covers salaries

Chapter 11 and 13: cover recurrent costs. Chapter 13 is also called ADD (Accelerated District Development) and is paid directly to the OD office, bypassing the provincial treasury and PHD.

law[1], also referred to as Accelerated District Development (ADD), an experimental fund mobilization procedure.

The Ministry of Health will ensure the Central Medical Store (CMS) will regularly and timely provide the hospital with drugs and consumable medical equipment, according to its actual needs. These needs are estimated to increase from R16.2 million monthly to R18.9 million monthly in the third year.

◆The Provincial Health Department (PHD)

The PHD commits itself to facilitate administrative procedures and human resource issues, in particular for the reduction of staff in the hospital. The PHD will play a supporting role in the relationship between the hospital and the Ministry of Health in the one hand, and with lower levels of the horizontal health structure and the population on the other hand. The PHD must strengthen the links in the referral system, between the Provincial Hospital, the Operational Districts and the Health Centers.

The PHD guarantees a swift mobilization of the total budget, received from the Ministry and intended for Takeo hospital, and agrees with the high level of autonomy in financial management in the hospital.

◆The Management Committee

The Management Committee assumes responsibility for monitoring the daily functioning of the HFS. The Management Committee includes 18 members, of whom five represent the community. Several official partners from the health authorities and administrative authorities are represented, in order to widen the scope of considerations in the decision-making process. Elected representatives of all categories of the hospital professionals are seats in the Committee.

The global contract states

- The Management Committee is the legal body accountable for the Hospital Financing System. The Management Committee consists of elected representatives of the hospital personnel, key members of the community and authorities of the concerned governmental institutions.

- The role of the Management Committee is to establish a direct line between the stakeholders and the performance of the hospital. In this it vouches for the respect of the founding principles of the HFS, especially with regards to the hospital staff behavior. On this later point, each staff is engaged in an individual contract with the Management Committee (See next page).

The tasks of the Management Committee include:

To manage the inputs allocated to the recurrent costs,

To determine each month the Performance Related Bonus for each staff member,

To monitor daily and supervise monthly the functioning of the HFS,

To grant fee-exemption to poor patients following a determined procedure, to propose sanctions against staff who did not respect the articles of their individual contract.

The Management Committee meets weekly and reports to the MoH, the PHD, the hospital Directors and to the community.

- **The Directors** of Takeo Referral Hospital acknowledges the role of the Management Committee in the routine functioning of the hospital.

- **The Takeo Provincial Administrative Authorities**, will respect the special statute of the pilot project in the Takeo Hospital and vouches for the Provincial Treasury to operate swift mobilization of the full amounts, received from the Ministry and intended for Takeo hospital.

- **The NGO Swiss Red Cross**, as supporting agency will provide managerial and financial assistance, advisory services and training.

The SRC will participate with the Management Committee and the Health Financing Task Force in monitoring and evaluating the HFS in Takeo Referral Hospital, with a special focus on the transparency of managerial and financial procedures.

The SRC commits itself to providing a monthly 'fill the gap' financial support to in the Hospital Financing System. This is featured by:

A maximum of R765.5 million (US$ 283,500) over three years,

A decreasing mode as follows: R382 million for the first year, R248 million for the second and R135 million for the third year.
Non-earmarked funds. However a subdivision of the funds for the financing of bonuses, running costs and drugs was proposed.

2) Contracting between the Management Committee and hospital staff

Following the commitment of the co-financing partners and other stakeholders in the Global Contract in September 1997, contracting between the Management Committee and hospital staff could now proceed. These individual contracts stipulate the rights and obligations of the hospital personnel with regards to the HFS. The contracts themselves are annexed with the 'Internal Hospital Regulations' and the individual job descriptions, elaborated by the Management Committee. The three mentioned documents were read out to the staff, before the signing session.
Each individual contract makes clear mention of the followings:

- The title of the position held by the signatory
- The working hours,
- The contributions to the night duty rotate when applicable
- Minimal monthly activities for some positions.
- The maximal monthly bonus the signatory is entitled to.
- The principle of monthly evaluation of the signatory to calculate the actual bonus to be paid to the signatory.
- The list of serious misbehaviors that could lead to the exclusion of the signatory from the hospital.

The 'Internal Hospital Regulations' put a strong stress on the fair behavior of the personnel towards the patients such as: abolition of informal fees, respect of opening hours, professional and ethical behavior, respect for privacy and prohibition to lure patients in private practices.
The contracting personnel is also granted the following benefits:
Free of charge hospitalization for them

50% discount on hospitalization fee for the direct members of their family

D. Performance related Bonus (PRB) for all hospital staff:

The average monthly maximum bonus among the 149 hospital staff members is $US 95.
Bonuses range from US$ 50 to US$ 250

E. Introduction of official user fees

The 1996 National Charter on Health Financing provides a loose framework for the introduction of user fees in the health sector and therefore opens the door to initiatives in this field. Takeo Hospital was the first health structure to take a radical position on transparent fees against former unofficial payments.

Among the various options of user's financial contribution for services, Takeo Hospital chose to introduce a range of flat fees for the most common packages of services. This choice was strongly influenced by the fact that the hospital could theoretically enjoy an exhaustive supply of drugs by the CMS. These permits to a large extend to consider package of services regardless of the prescribed specific treatment that can generate large differences in actual cost for the hospital. Also, this option appeared likely:

- To offer the population a simple system of fixed fees, in order to make health expenses somehow predictable
- To facilitate transparency and avoid tricks
- To ensure financial accessibility for the vast majority of the population
- To secure income for the hospital, and achieve a balanced budget
- To be able to offer attractive services, competitive with other providers

The set of fees presented below in table 4, was determined by integrating the socio-economic analysis for the financial accessibility concerns, and the financial

feasibility analysis for the sustainability concerns. This also took into account the other expected inputs and a fair level of PRB (Performance Related Bonus) for the staff of the hospital.

Table 3.4: Takeo Hospital user fees per health care intervention

Year 1997: US$ 1 = R 3,000; Year 2000: US$ 1 = R3, 800

Package of services	1998-1999		2000 to present	
	In Riel	(US$)	In Riel	(US$)
Out-patient generalist consultation (OPD-generalist), including service and drugs	5,700.00	1.5	6,240.00	1.6
Out-patient specialist consultation (OPD- specialist), including service and drugs	7,600.00	2.0	8,190.00	2.1
OPD wound dressing and small surgery	19,000.00	5.0	20,670.00	5.3
Dentist, 2 categories	3,860.00	2.2	9,360.00	2.4
	19,000.00	5.0	20,670.00	5.3
Physiotherapy	4,180.00	1.1	4,680.00	1.2
Diagnostic support:				
X-Ray, Echography or ECG.	11,400.00	3.0	12,480.00	3.2
Laboratory	4,180.00	1.1	4,680.00	1.2
(IPD): up to 1 week	35,340.00	9.3	39,000.00	10.0
Any length more then 1 week	78,660.00	20.7	84,240.00	21.6
Surgery: 3 categories:				
T1: minor surgery, local anesthesia	57,000.00	15.0	71,760.00	18.4
T2: medium, with general anesthesia	114,000.00	30.0	143,520.00	36.8
T3: major surgery, complex, transfusion	152,000.00	40.0	195,000.00	50
Maternity: delivery without complication	35,340.00	9.3	39,000.00	10

(Source: Takeo Hospital)

Then, user fees do not take into account the specificity or the severity of the pathology that can greatly influence the actual cost of the provided package of services. Outpatient consultation fee covers one episode of disease, including five days of treatment. The hospitalization fee includes accommodation, two standard meals, diagnostic technology, services and drugs. Fees for surgical performance include the admission itself and related services.

It must be noted that these fees are substantially lower than the estimated 'under-the-table' payments formerly bribed from the patients. These fees also prove lower than what patients usually pay for equivalent services to alternative providers, public or private.

When put in line with the outcomes of the socio-economic survey the following points show:

-80% of the population would be able to pay for a hospitalization, using just one fifth of their total monetary capacity, thus without putting the family economic future at risk.
-28% of the population would be able to pay for the cost of hospitalization without selling any of their assets and just using their monthly cash income
The fees collected by the Takeo Hospital maternity are slightly less than the average expenditure for a delivery at home, which is the location of giving birth in 95% of the cases, or US$ 10.3 (Brun & Chukmel, 1996).

The revenue from users is for 99% retained in the hospital, 1% is paid to the National Treasury. The income from the user fees can be used to a maximum of 49% to fund the Performance Related Bonuses of the hospital staff. The remaining 50% is to be allocated to other recurrent costs, including the purchase of additional drugs.

F. Creation of a fee for exemption system for the poorest ones:

The National Charter on Health Financing makes the development of a fee-exemption system for the poor conditional to the introduction of user fees. Indeed, a major risk of such cost recovery strategy is to exclude the poor from the public service. Actually, the poor were widely excluded with the previous payment system. Then the true purpose of the fee exemption system is rather to reverse this situation. Application to fee-exemption is made on a voluntary basis at the reception desk where fee-exemption is advertised.

Each day, by weekly turns, one member of the Management Committee is made available to screen applicants. The grid is filled and a file is open and archived whatever the outcome of the screening. The grid provides the decision-maker with a score that is above or under the threshold. However, the final decision also takes into account the conversation with the patient, who may have faced exceptional hardship or experienced special circumstances. At the end the applicant can be granted a full or partial fee-exemption. If the patient is granted exemption, the information is kept confidential at the reception. The medical file of such patient does not show any distinctive mark that could lead to differential treatment or behavior.

The fee exemption system was advertised in the villages by giving discharged patients an explanatory leaflet.

In addition, free of charge hospitalization is systematically granted to TB cases, registered orphans and registered disabled people (estimated at 2,500 people in the province).

In the design of the HFS a careful attention was given to avoid economic exclusion of patients, although financial sustainability was also a concern. The financial projections allowed a proportion of fee exemption for 10-20% of the volume of patients without endangering the balancing of the hospital budget.

G. Introduction of quality control mechanisms

-Some tools are introduced to assess the quality of services.
-The Personnel Opinion Poll has been held twice
-A patient satisfaction survey has been implemented once, and regular patient interviews were conducted the first year
-There is the monthly individual staff performance assessment that has to be made, before the bonus can be calculated. The evaluation charts are specific to each position, and are also aimed at stimulating gradual improvement of performance.
-The most important improvement of the hospital management in general, came with the introduction of an elected Management Committee, representing all levels of personnel, and taking charge of the day-to-day hospital management. The restructuring of the hospital, the rationalizing of the patient circulation, cash flow, information flow, and overall transparency in the hospital functioning brought on other improvements linked to the quality of services. Many small managerial tools and monitoring systems have been introduced, to make each staff member more responsible and accountable. Clear job descriptions for each position and the introduction of new functions, such as head nurse, improved the quality of the organization. Recognition of technical and medical competence has been stimulated by these developments, and favorable to a more professional approach towards duty.

These are direct consequences of the introduction of the HFS. For more details, refer to, qualitative results.

Several sub-committees have been established in answer to specific issues:
-Sub-committee for evaluation
-Sub-committee of investigation
-Sub-committee for elaboration and modification of HFS principles
-Sub-committee of procurement.

Other good practices that were introduced some time before the HFS such as continuous education in the form of weekly sessions with nurses, and separately with doctors, have been consolidated and included in job descriptions. Similarly, daily de-

briefing and systematic information exchange between shifts, improve the quality of case management, and brings the staff together as a team.

The quality of stock management in the hospital pharmacy had already benefited from earlier assistance, and was further supported, as supply of drugs became one of the major sources of income to be carefully managed in the HFS. Drug supply had to be valued exactly, and according to different sources, such as CMS, NGO's and own purchases. Indeed with the introduction of the HFS, the hospital had to manage for the first time its self-generated cash, and decide collectively what extra drugs or material should be bought, in order to guarantee maximum activity. Proper monitoring of expired drugs and running out of stock, was introduced later. The prescription and consumption of some medicines requires special procedures, either because the drugs are the most expensive or over-prescribed. High transparency in drug supply and consumption prevents the former undesirable practices from coming back. Also transparent and reliable record keeping is necessary to effective management of the pharmacy.

Quality of work improved due to the rewarding PRB. All patients receive reliable quality of care, regardless of under-the-table payments to individual staff. Monitoring of detailed activity per service and hospital financing has become monthly routine. Periodic collection and tabulation of public health indicators provide managers with the information required for their decisions. Periodic evaluation assesses the degree of success of the HFS, in implementing the planned strategies and attaining the activity objectives. Since the introduction of the HFS, these reports have a greater significance for the staff, as their bonus is linked with the overall achievements of the hospital team.

3.3.4. The results of the hospital financing scheme.

a) Quantitative results, Takeo Hospital activity, 1995-2000

A general remark on the database used for this presentation:

- Data have been compiled and processed from monthly and yearly reports.

- Data on hospital activities are available for the years before the introduction of the HFS. However, some data on services such as radiology, ultrasound examination, and pediatric consultations are missing for some years. These services were not yet independently organized or operated as private practices in the hospital.

- Financial data prior to the implementation of the HFS are not available. Although fees were collected from patients at several points in the hospital, the charges were not systematic, no receipts were produced, and no records on revenue were kept. The validity of some data before 1997, can be questioned.
-One advantage of the introduction of the HFS is more accurate reporting and bookkeeping. Over the three years some changes in reporting has occurred.

The pneumology department only receives tuberculosis (TB) patients. Patients with other respiratory conditions are treated in the internal medicine department.

This report uses calendar years. The HFS started in October 1997, therefore, 1997 data already reflects the impact of the HFS in its last two months.

1) Activity of outpatient consultations from 1995 to 2000

Specialized consultations include ENT, pediatrics and gynecology-obstetrics. The total number of outpatient consultations dropped.

The number of specialized consultations increased however, especially ENT and gynecology and obstetric consultations.

This is in line with the mandate of Takeo Hospital as referral health facility, focusing on the complementary package of activities (CPA). The Health Center next to the hospital should handle general consultations. The decline in the number of general consultations in the public hospital may also reflect a growing availability of private health services in Takeo city and surroundings.

Table 3. 5: Out-patient consultations, per year

OPD	1995	1996	1997	1998	1999	2000
General Consultations	9,539	12,890	7,813	9,097	5,373	4,741
Specialized cons.	903	1,066	1,327	2,328	2,022	1,602
X-Ray & Ultrasound	N.A.	2,113	3128	3558	2114	2257
Laboratory	N.A.	N.A.	557	1,579	1,032	1,259
Small surgery	622	340	1,334	2,003	1,357	1,248
Dentist	2,693	3,132	2,754	1,909	1,139	866
Physiotherapy	59	43	53	147	53	26
TOTAL	**13,816**	**19,584**	**16,966**	**20,621**	**13,090**	**11,999**

(Source: Takeo hospital activities report book)

Pediatric consultations are almost inexistent. This may prompt the question whether the concept of pediatrics is known at all by the population or by the referring health structures. Almost none of the patients visiting Takeo Hospital have been referred.

Laboratory tests are still much in demand in Takeo hospital. Availability of consultations in the private sector may explain the decline in general consultation activity in Takeo Hospital.

Activities in the dental clinic have declined substantially after the introduction of the HFS. The range of dentistry services was reduced, to cover only basic acts such as extractions. The dentist no longer works full-time in the hospital, offering a wider and more expensive range of dental services from private premises in town.

Fig. 3: Number of OPD consultations, per year

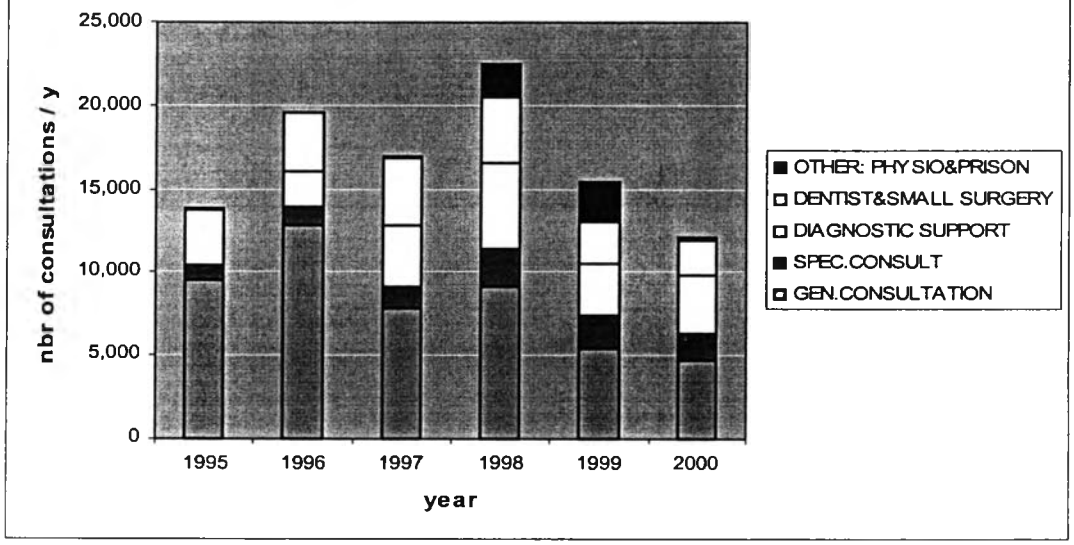
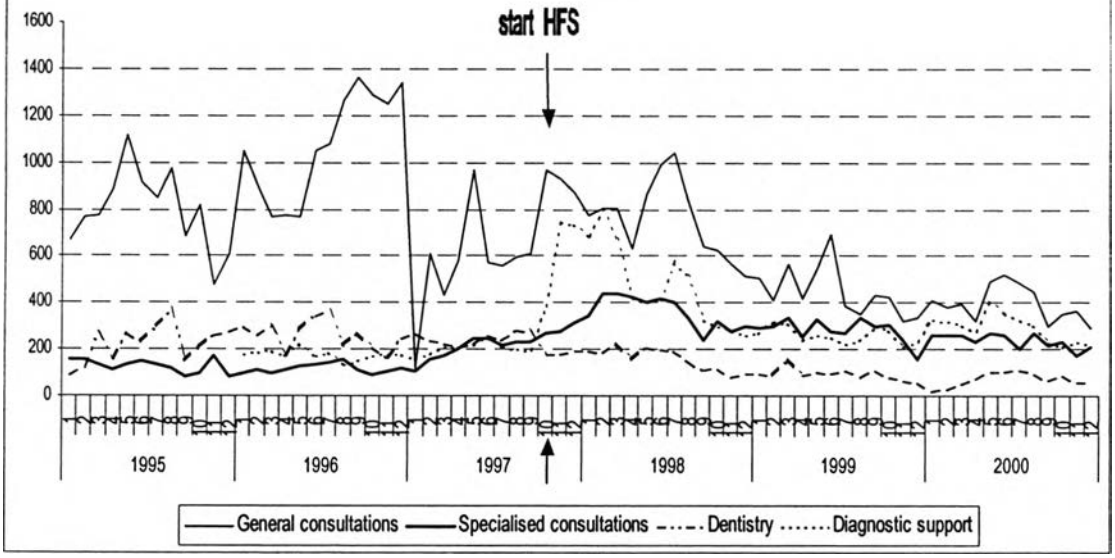


Fig. 4: Out-patient consultations, per month



2) Activity of in-patient section from 1995 to 2000

BOR = Bed occupation rate, in %

ALOS = Average length of stay in the hospital, in days

Patient-days = the total number of days spent in the hospital by all patients, in days

Table 3. 6: Admissions in Takeo Hospital, on year basis

	1995	1996	1997	1998	1999	2000
Total number admissions /year	5,220	4,305	5,083	7,877	7,548	7,449
BOR on year basis	55%	59%	69%	102%	109%	111%
Patient-days / year	35,073	37,878	44,199	65,767	70,148	71,549
ALOS in days	6.7	8.8	8.7	8.3	9.3	9.6
% Patients disappeared	3.6%	6.2%	2.2%	1.7%	1.4%	1.6%
Number of beds	176	176	176	176	176	176

Table 3.7: Surgical activity, 1995 to 2000, per year

	1995	1996	1997	1998	1999	2000
Emergency surgery	571	607	735	955	1,028	987
Programmed surgery	524	649	596	949	879	783
Total	1,095	1,256	1,331	1,904	1,907	1,770
# Blood transfusions	1,105	674	609	773	773	605

(Source: Takeo hospital activities report book)

Table 3. 8: Admissions per service, per year, compares with the period of the first three years of the HFS. Figure 5 and figure 6 illustrate the strong global increase, and the trends per department, in admissions and patient-days.

Number of admissions in 3 years, per service, per year				Average 3y		Number of admissions in 3 years, per service, per year			Average 3y
	1995	1996	1997	Before HFS		1998	1999	2000	After HFS
Internal medicine	1,423	1,102	1,412	1,312	Internal medicine	2,223	2,649	2,370	2,414
Pediatrics	1,043	616	856	838	Pediatrics	1,674	832	954	1,153
Pneumology	0	285	400	228	Pneumology	444	425	459	443
Gynaeco-Obstetetrict	1,088	986	987	1,020	Gynaeco-Obstetrict	1,457	1,552	1,638	1,549
Surgery	824	589	642	685	Surgery	1,255	1,263	1,096	1,205
ICU	842	727	786	785	ICU	824	827	932	861
TOTAL	**5,220**	**4,305**	**5,083**	**4,869**	**TOTAL**	**7,877**	**7,548**	**7,449**	**7,625**

(Source: Hospital Provincial de Takeo, report book)

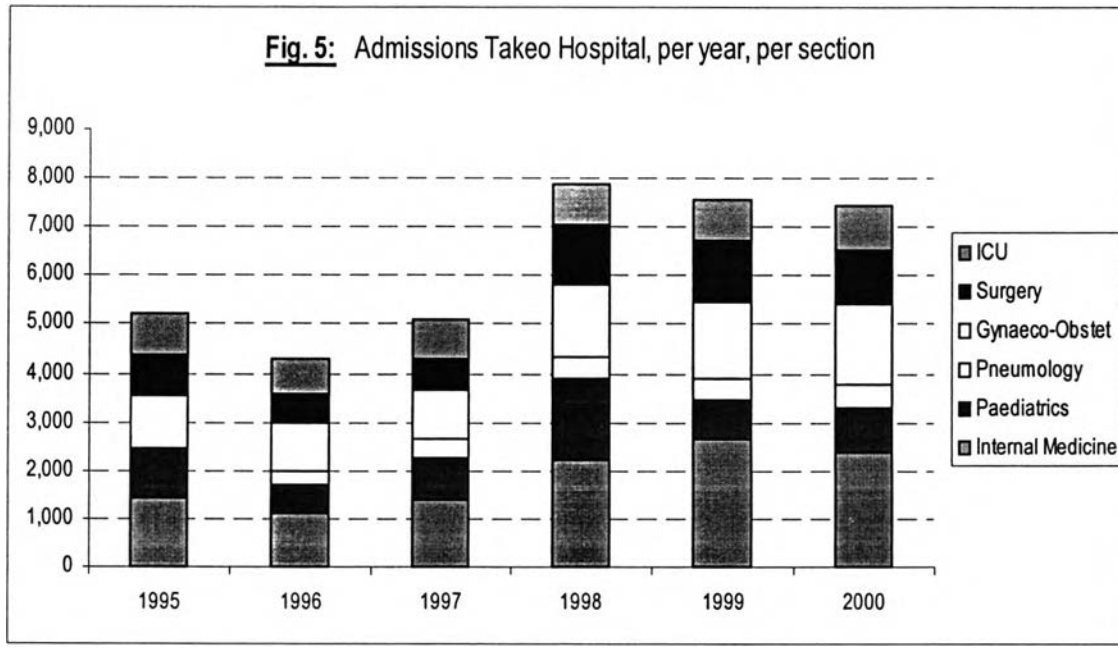
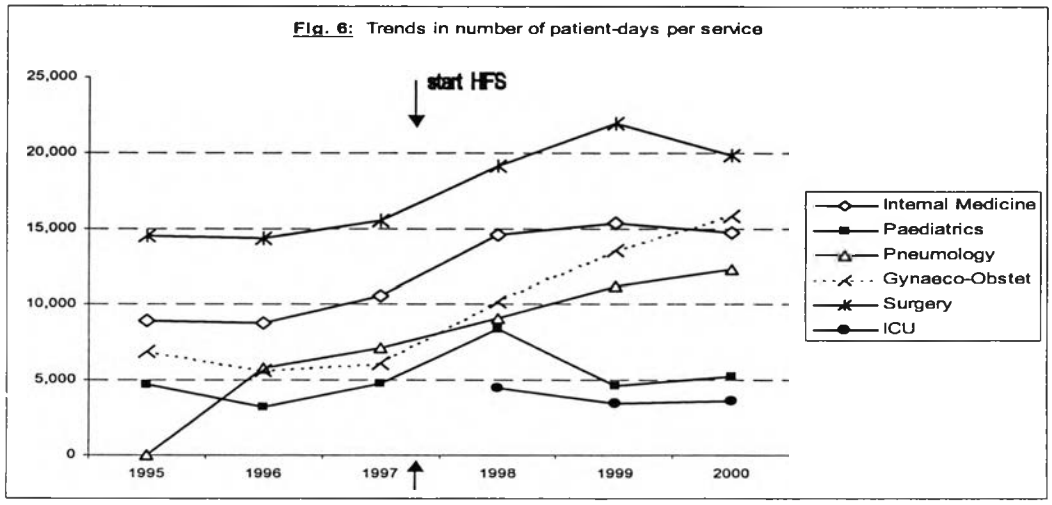


Table 3. 9: Number of patient-days per service, per year

Number of patient-days in 3 years, per service, per year				Average 3y
	1995	1996	1997	Before HFS
Internal medicine	8,907	8,795	10,599	9,434
Pediatrics	4,739	3,242	4,804	4,262
Pneumology	0	5,837	7,135	4,324
Gynaeco-Obstet	6,907	5,638	6,129	6,225
Surgery	14,520	14,366	15,532	14,806
ICU				0
TOTAL	**35,073**	**37,878**	**44,199**	**39,050**

Number of patient-days in 3 years, per service, per year				Average 3y
	1998	1999	2000	After HFS
Internal medicine	14,540	15,349	14,699	14,863
Pediatrics	8,365	4,663	5,256	6,095
Pneumology	9,123	11,198	12,335	10,885
Gynaeco-Obstet	10,150	13,559	15,820	13,176
Surgery	19,159	21,965	19,822	20,315
ICU	4,430	3,414	3,617	3,820
TOTAL	**65,767**	**70,148**	**71,549**	**69,155**

(Source: SRC, Hospital Provincial de Takeo)



The spike of pediatric admissions in 1998 is in relation with an epidemic of dengue fever.

In the above tables and figures, a strong increase of admissions as well as of patient-days can be observed. From this perspective, some resources have been mobilized to increase the capacity of Takeo Hospital. Also, some internal organizational changes, such as the shift of personnel from the OPD to the Surgery Unit are in process to be able to adapt to the situation.

As for the geographic origin of patients using the Takeo referral hospital, more than half live in the Operational District (OD) of Daun Keo. People coming from other OD's within Takeo province make up a fifth of the patients. The rest of the users, about a quarter, come from other provinces, mainly neighboring Kampot province, but also some from the capital. The border of Kampot province is indeed not far from Takeo Hospital. Twenty nine percent of admitted patients and 23% of OPD patients come from outside Takeo province. This influx contributes to the revenue of the hospital, and reflects the appreciation for the cost/quality of Takeo Hospital services by the public. None of the patients coming to Takeo Hospital have been referred through an established referral system. Consult Appendix 7 for details on the geographic origin patients.

b) Staff and beds per service

Table 3.10: Qualification of staff per service in 2000 (excl. 2 part-time dentist)

	Service	MD	Med. Ass	Nurse	Midwife	Pharma-Cy	Lab	Technical cleaner	Total 2000
1	Reception			3					**3**
2	OPD	1	2	10					**13**
3	Internal Medicine	3		11	1				**15**
4	Gynaeco-Obstetrics	1	2		13				**16**
5	Pediatrics	2		10	1				**13**
6	Pneumology	1		5					**6**
7	ICU	1	1	9	1				**12**
8	Surgery ward	2	1	12	2				**17**
9	Surgical theatre	1		13					**14**
10	X-Ray, Physiotherapy			5					**5**
11	Laboratory		1	1		1	10		**13**
12	Pharmacy			1		3			**4**
13	Administration	1		3	1				**5**
14	Technical staff			1				12	**13**
TOTAL STAFF 2000		**13**	**7**	**84**	**19**	**4**	**10**	**12**	**149**

(Source: SRC, Takeo Hospital)

In 2000 there were 149 staff, of whom 77 women (incl. 65 nurses and midwifes, no MD).

Total 176 beds, unchanged from 1996-2001, with extra unofficial beds =225 beds.

(Official beds: Internal medicine: 45, Pediatrics: 30, Gynecology and Obstetrics: 25, ICU: 8, Surgery: 46, other...).

c) Financial Result:

Table 3.11: Takeo hospital monthly revenues, by source expressed as US$ and percentage of total annual revenue per month, 1998-2000.

	1998		1999		2000		Average	
Public budget[1]	10,057	30%	20,464	47%	17,714	44%	16,078	41%
User fees	12,614	38%	13,505	31%	12,643	32%	12,921	33%
Swiss Red Cross	8,651	26%	5,862	14%	5,329	13%	6,614	17%
CNTS Blood bank	1,558	5%	1,579	4%	1,277	3%	1,471	4%
Other income	116	0%	1,912	4%	3,067	8%	1,699	4%
Contracts	236	1%	81	0%	80	0%	132	0%
TOTAL	**33,232**	**100%**	**43,403**	**100%**	**40,110**	**100%**	**38,915**	**100%**

(Source: Swiss Read Cross, and Takeo Hospital Financial Report Book)

Table 3.12: Takeo provincial hospital monthly expenditures, by major line item expense expressed as US$ and % of total annual revenue per month, 1998-2000

	1998		1999		2000		Average	
Bonus	14,883	45%	14,825	34%	13,589	34%	14,432	37%
Salaries	1,841	6%	2,038	5%	2,029	5%	1,969	5%
Drugs	11,906	36%	20,314	47%	17,911	45%	16,710	43%
Operational costs	4,119	12%	6,089	14%	6,455	16%	5,555	14%
Other, incl. 1% tax	483	1%	136	0%	122	0%	248	1%
TOTAL	**33,232**	**100%**	**43,402**	**100%**	**40,106**	**100%**	**38,914**	**100%**

(Source: SRC, Takeo hospital report book)

The average total amount of bonuses was 14,680USD per month for the whole hospital.

Average bonus = 98.5USD per person per month (Minimum USD 44.8-USD50, median USD 90, maximum 250USD/m).

We illustrate the spread of the bonus levels, with an example of a typical month (10/1999). In the table below, the services are sorted according to the average bonus level of its staff.

Table 3.13: Details on the Performance related bonus

Service	# Staff	Total bonus per service	Average $/staff
Pharmacy	4	612	153.0
Administration	5	684	136.8
Surgical theatre	14	1,683	112.2
Gen Medicine	15	1,662	110.8
OPD	13	1,358	104.5
ICU	12	1,116	93.0
Gynaeco-Obst	16	1,481	92.6
Surgical ward	17	1,565	92.1
Pediatrics	13	1,264	97.2
Para-medicals	5	540	108
Reception	3	337	122.3
Laboratory	13	1,071	82.4
Pneumology	6	448	74.7
Technical service	13	859	66.1
TOTAL	149	14,680	98.5

(Source: SRC Hospital Provincial de Takeo)

The pharmacy, administration including direction and surgical theatre staff are on average granted the highest bonus level.

There is a strong link between qualification and position, and the level of bonus. About half the staff receives bonus levels that do not bring their income above 100USD a month, the threshold for live able income.

Table 14 illustrates how many indigent people and TB patients receive exemptions per month, and for what total value. The number of exempted people is

compared with the total number of patients in the hospital. The value of exemptions is compared with the total value of delivered services.

Table 3.14: Beneficiaries of exemptions and total value:

Average per month, in US$ and number of patients										
	ALL PATIENTS		INDIGENT PATIENTS				TB PATIENTS			
YEAR	Total value services delivered	total nbr patients	value$ poor exempt	total poor patients	% of tot value for poor	average $ / P.	value USD TB	total TB patients	% of tot value for TB	average $ / P.
1998	12,882	2,500	66	10	0.5%	6.6				
1999	14,065	1,921	130	11	0.9%	11.8	775	32	5.5%	24.3
2000	13,795	1,764	192	15	1.4%	12.9	924	38	6.7%	24.3
average 3 years	13,581	2,062	130	12	1.0%	10.8	849	35	6.3%	24.3

(Source: SRC, Takeo Hospital report book)