Kingdom of Cambodia
Nation Religion King

Ministry of Health

Health Situation Analysis 1998

and

Future Direction for Health Development 1999-2003

Department of Health Planning and Information

October 1999

FOREWORD

The past twenty years of civil war have left Cambodia with poor public services and infrastructure in comparing with the rest of the Western Pacific Region, though considerable progress over the past 6 years have been made. Although most major frameworks or mechanisms for health development are already in place with significant progress, the health status of Cambodian people remains among the lowest in the Western Pacific Region.

The objective of this paper is to pinpoint critical concerns and challenges facing Cambodia health sector. It also provides the policy directions in meeting the long-term vision for health development and it global financial plan including commitment pledged and resource gap.

This document is divided into three parts. The first part shows general situation of health system and the Cambodian people's health situation as well. The second part indicates health policy and strategies 1999-2003. The rest of the document provides the summary of the Public Investment Program 2000-2002.

In order to achieve the objectives written in this document, the Ministry of Health requires participation and support from all partners, including national and international communities.

I hope that this document is a guide for showing direction to achieve the improvement of health and well being of Cambodian people, in conformity with the national vision.

Phnom Penh, August 1999

SENIOR MINISTER

Dr. HONG SUN HUOT

ABBREVIATIONS

ADB	Asian Development Bank
ARI	Acute Respiratory Infection
CENAT	National Anti-Tuberculosis Center
CPA	Complementary Package of Activities
DHO	District Health Office
EOP	End of Project
EPI	Expanded Program of Immunisation
GDP	Gross Domestic Product
HBsAg+	Carrier of Hepatitis B surface Antigen
HC	Health Centre
HCDS	Health Care Demand Survey
HIS	Health Information Systems
HIV	Human Immuno-deficiency Syndrome
HRD	Human Resources Department (Ministry of Health)
IMF	International Monetary Fund
IO	International Organisation
JICA	Japanese International Co-operation Agency
MCH	Mother and Child Health
MEDICAM	Medical Cambodia (NGO Health Sector Committee)
MEF	Ministry of Economy and Finance
MOH	Ministry of Health
MPA	Minimum Package of activities
NGO	Non-Governmental Organisation
NHS	National Health Survey
OD	Operational District Health
PHC	Primary Health Care
PHD	Provincial Health Director
PHD	Provincial Health Director/Directorate
PHDt	Provincial Health Department
PROCOCOM	Provincial Co-ordinating Committee (Health Sector)
RGC	Royal Government of Cambodia
RH	Referral Hospital
SBHS	Strengthening Basic Health Service
SESC	Socio-Economic Survey of Cambodia
SHS	Strengthening Health Systems
STD	Sexually Transmitted Disease
STD	Sexually Transmitted Diseases
TB	Tuberculosis
TBA	Traditional birth Attendant
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
US$	United State Dollar
WB	World Bank
WHO	World Health Organization

Part 1
Health Situation Analysis

Table of Contents

1.1 The Country

1.1.1 Demography characteristic

The Kingdom of Cambodia occupies a territory of 181,035 square kilometres. It located in the south-western corner of Indochina. According to the Ministry of Planning, the Kingdom of Cambodia has a total population of 11,426,223 in 1998. With an annual growth rate of 2.4%, The proportion of female is 51.8%, and children under 15 years old is 48.2%. The high percentage of women and children indicates that meeting their health needs must be a high priority. A large proportion of population (84.3%) lives in rural areas and only 15.7% live in urban areas. Phnom Penh, the capital city, has a population of 997986.

The average of national population density is 64 per km^2. This density varies a lot from one province to another, for instance, from 2 per km^2 in the province of Mondol Kiri to 3,441 per km in the Phnom Penh City. (See also Table 1)

Table 1: Cambodia main social indicators

Goal	Indicator	Value
Population	Total population	11,426,223
	Percent of total population	51.8%
	Sex Ratio-males for 100 females	93.1
	0-4 years old as percent of total	13.4%
	5-14 years old as percent of total	30.5%
	15-64 years old as percent of total	52.6%
	>64 years old as percent of total	3.5%
	Average number of inhabitant per household	5.2
	Natural Growth Rate in percent	2.4%
	Life expectancy at birth of male	53.8 years
	Life expectancy at birth of female	58.7 years
	Male and Female	54.4 years
	Crude Birth Rate (per 1000 population)	38
	Density of population per km. sq.	64
	Percentage of population living in urban areas	15.7
	Percentage of population living in rural areas	84.3
Mortality	Under 5 Mortality Rate (per 1000 live births)	115
	Infant Mortality Rate(per 1000 live births)	89.4
	Maternal Mortality Rate (per 100,000 live births)	473
Education	Percentage of literate male adult (>15years) in 1997	79
	Percentage of literate female adult in 1997	55
	Percentage of literate adult in 1997	65.9

Source:

General Population Census 1998 : Ministry of Planning
Cambodia Human Development 1998: Ministry of Planning
National Health Survey 1998: Ministry of Health

1.1.2 Organisation of the Cambodia Administration

The country is divided into 24 provinces/municipalities, 182 districts, 1623 communes and 13,408 villages. Prior to 1993, serious problems of co-ordination derived from very autonomous peripheral administrations (provincial, district and commune authorities), in which provincial health development with the support of external agencies led to multiple strategies at all levels and regions. This situation eased somewhat after the proclamation of a new constitution in late October 1993. Authority and responsibility for program development and budgetary control, for local health units were transferred from the local governors to the Ministry of Health.

The macro-economic structural adjustment policy initiated by the World Bank (WB) and the International Monetary Fund (IMF), the RGC's Memorandum of Economic and Financial Policies (MEFP) required containing or downsizing the civil service, and military demobilisation.

1.1.3 Overall Socio-economic situation

After 1979, the Cambodian economy was organised predominantly along a centrally planned system. Some economic liberalisation began in 1985, and this accelerated in 1989. Since the signing of the Paris Peace Accord in 1991, the reform process has been deepened and widened, to the point that the country is now operating as a market-oriented economy.

According to the World Bank, Cambodia's achievements in macro-economic development until 1996 have been impressive when compared with that of some post-conflict countries. However, the GDP was very fluctuate since 1993. Cambodia remains one of the poorest countries in Asia, with a per capita income estimated at 252US$ in 1998. The Government expenditure on health was only 1US$ per capita in 1998. Table 1 and 2 show a number of mains socio-economic characteristics of the country.

Table 2: Trend of Cambodia Gross Domestic Product and government budget devoted to the Ministry of Health.

	1993	1994	1995	1996	1997	1998	1999
Nominal GDP Per capita in US$	200	241	284	292	276	263	310
Government Budget devoted to the Ministry of Health (In US$ per capita)							
Planned			1.58	2.75	2.12	1.53	2.59
Expenditure			1.03	1.62	1.58	1.08	
Government Budget devoted to the Ministry of Health							
% of nominal GDP			0.51	0.73	0.67	0.6	0.83
% of total Government Budget			4.0	6.1	6.0	6.3	7.0

1.2 Health Status

The health status of Cambodian people is among the lowest in the Western Pacific Region (See Table 3). The Infant Mortality Rate was 89.4 per 1000 live births in 1998. This data is high in comparison to the average mortality rate in this Western Pacific Region, which is only 38 per 1000 live births in the same period. The mortality rate of children under 5 is 115 per 1000 live births (average mortality rate in the region is 50/1000 live births). The main causes of death are diarrhoea disease, acute respiratory infection, dengue fever, vaccine preventable diseases, and protein-energy malnutrition and micronutrient deficiency. In 1996, 49.3% of children aged 0-59 months were moderately and severely underweight.

The maternal mortality ratio is 473 per 100,000 live births (The average mortality ratio in the region is 120/100,000 live births in 1998). The main causes of death are due to consequence of abortion, eclampsia and haemorrhage.

Table 3: Key Cambodia Health Status compared to neighbored countries

	Cambodia	Vietnam[a]	Thailand[a]	Laos[a]	Western Pacific Region[a]
Life Expectancy at Birth Male	54[b]	65	66	52	73
Female	58[b]	70	72	55	73
Infant Mortality Rate	89[c]	38	39	93	38
Maternal Mortality Rate	500[b]	160	200	650	120

Sources:

a: The World Development Report 1999: World Health Organization
b: Cambodia Human Development Report 1998: Ministry of Planning
c: National Health Survey 1998: Ministry of Health

Malaria is a major cause of morbidity and mortality in all age groups of the population, especially in socio-economically productive age groups. New cases of malaria diagnosed and treated at public health facilities total over 1% of total population. The actual numbers of malaria cases are higher than this figure because a certain number of patients are treated by the private sector. In 1998, 147,077 new cases of malaria were diagnosed and treated at public health facilities. The

Case Fatality Rate of malaria was 0.43% in 1998. The groups of people affected by malaria are forest dwellers and migrant forest workers.

Tuberculosis is still a main health problem in Cambodia. In the recent years, there have been about 15,000 new cases of tuberculosis diagnosed and treated at public services each year. The actual number is higher than this figure. Of great concern is an increasing incidence of tuberculosis associated with AIDS. With HIV tested positive prevalence of 3.9%, the increase of new cases of AIDS will increase the new cases of TB. The new cases of TB associated with HIV infection in 1997 are calculated at 12% and projected to increase to 20% by the year 2000. However, the cure rate of TB has increased from 64% in 1995 to 89% in 1998.

In Cambodia HIV/AIDS is a priority health problem nowadays. HIV prevalence among blood donors had increased from 0.10% in 1991 to 3.60% in 1997. This trend indicates an epidemic increase of AIDS among the high-risk population groups, (e.g.: commercial sex workers) together with an increase in population in general (e.g.: housewives and children). In 1998 the prevalence of HIV tested positive was 3.6 among adult 18-45 years old (Sex ratio male to female: 2/1), 2.6% among women at child bearing age, 30-60 among commercial sex workers. Currently, there are 150,000 HIV infected people in Cambodia. There were 1494 AIDS patients treated in the public health facilities, and an estimation shows that there were 16,000 AIDS patient in the country in 1998.

Cambodia is a country with high hepatitis B endemically. The prevalence of carriers of hepatitis B surface antigen (HBsAg+) among blood donors was 7.5% in 1998.

To date, leprosy no longer poses a significant public health problem. The objective of the leprosy control program is to lower leprosy prevalence to less than 1 case among 10,000 people by the year 2000. In 1998, the prevalence rate is 1.35‰, which is less than 25% of that in 1997.

Mine accidents are also a major problem. However, the total number

of mine accident cases reported by public health services were decreased from 1,265 in 1997 to 727 in 1998. The amputation prevalence rate is one per 236 persons, which is the highest rate in the world. The number of case of road traffic accidents treated in the public health facilities was significantly increase 7,196 in 19997 to 8,000 in 1998.

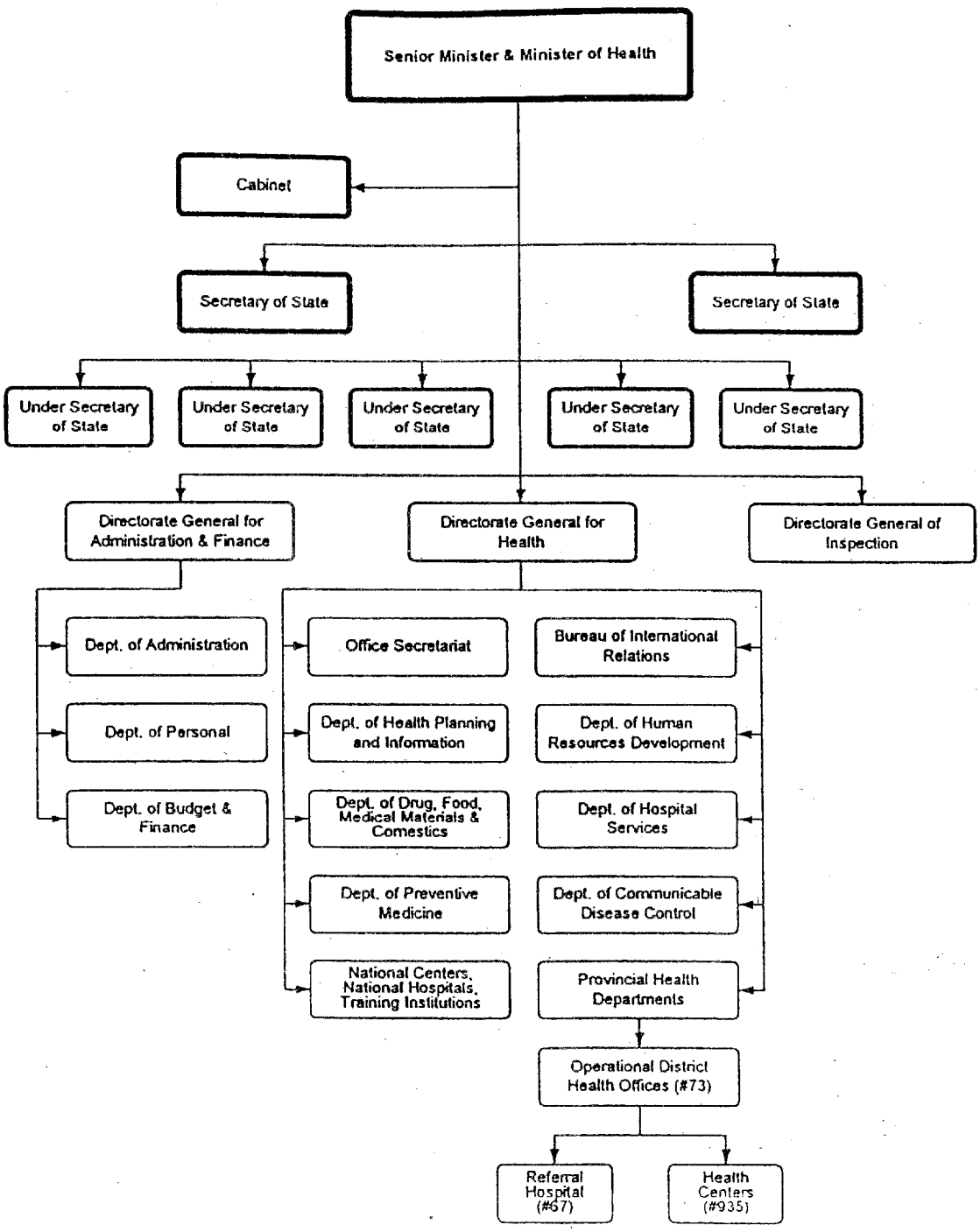
The Ministry of Health of the Kingdom of Cambodia acknowledges the effects of posttraumatic events affected by the long war, unstable politics and poverty etc. On health, these issues can be a major cause of mental health problems, which need services to cure and counsel. Despite the lack of scientific research on the extent of this problem, the Ministry of Health is strengthening mental health services by developing a program which is responsible for mental health, with mental health training in and providing services to a certain number of public health facilities.

I.3 Public Health Services

1.3.1 Organisation and infrastructure

Currently, the health system is divided into three levels: central, provincial and operational district including health centre and referral hospital. The central level consists of two training institutions, two institutes, six national centres, one drug factory, and eight national hospitals containing 1786 beds. The provincial level consists of 23 Provincial Health Departments (PHDt), four Regional Training Centres (located in the provinces of Battambang, Kampong Cham, Kampot and Stung Treng), and 23 provincial hospitals (5,196 beds). The operational district level has 42 referral hospitals, 116 health centres which are former district hospitals with 3,908 beds, 272 health centres without beds, and 878 commune infirmaries. The number of hospital bed per thousand inhabitants was 0.96. This number is low comparing to Vietnam (3.30, Laos (2.6) and Thailand (1.6). However, the reorganization of the public health system does not required the increase in the number of hospital bed in Cambodia.

The following figure shows the organisation chart of the MOH head quarter:


Senior Minister & Minister of Health
Cabinet
Secretary of State
Secretary of State
Under Secretary of State
Under Secretary of State
Under Secretary of State
Under Secretary of State
Under Secretary of State
Directorate General for Administration & Finance
Directorate General for Health
Directorate General of Inspection
Dept. of Administration
Dept. of Personal
Dept. of Budget & Finance
Office Secretariat
Bureau of International Relations
Dept. of Health Planning and Information
Dept. of Human Resources Development
Dept. of Drug, Food, Medical Materials & Comestics
Dept. of Hospital Services
Dept. of Preventive Medicine
Dept. of Communicable Disease Control
National Centers, National Hospitals, Training Institutions
Provincial Health Departments
Operational District Health Offices (#73)
Referral Hospital (#67)
Health Centers (#935)

1.3.2 Human resource for health

Cambodian professional classes, including health professionals, were decimated during 1975-79 with only 50 doctors remaining in 1979. Thus, to bridge the gap in health human resources in the early 1980's, "crash course" training was provided, mainly focusing on curative care. The poor quality of this training partly explains the inadequate technical capacity of the public health services to response to the currently reformed health care system delivery.

As of October 1998 there are 23434 health workers at all levels employed by the MoH, excluding other government agencies. It is estimated that two thousand health workers were trained in the border camps before 1993. The various categories of health workers include 4738 doctors/medical assistants and 14131 nurses/midwives.

The population-to-physician in Cambodia is higher than that observed in neighboring countries. However, the nurse-to-physician in Cambodia in low compared to Vietnam, Thailand, and Laos (See Table 4).

Table 4: Ration Doctor per thousand inhabitants and Nurse-to-doctor ratio

	Cambodia 1998[a]	Vietnam[d]	Thailand[d]	Laos[d]	Asia[d] (excluding China & India)
Physician per thousand inhabitants	0.41[b]	0.35	0.20	0.23	0.31
Ratio Nurse-to-doctor ration	3.0[c]	4.9	5.5	5.1	3.0

a: Including Ministry of Health and other ministries, as of 31st October 1998: Ministry of Health
b: Including medical doctor (7-year training at Medical Faculty and medical assistant (5-year training at Medical Faculty)
c: Including primary or secondary nurse, and primary or secondary midwife
d: World Development Report 1993, Investing in Health: The World Bank

According to the standard number of health staff for the implementation of the Health coverage Plan, these numbers are currently sufficient for health services. However, the currently human resources are poorly distributed to meet the health requirements of the population with a preponderance of skilled professionals in Phnom Penh, the capital City, and other urban areas, thus leaving remote areas are un-

Table 5: Distribution of MoH by Place of Works AS of 31 October 1998

Categories	Place of Work			
	Phnom Penh and Provincial Towns	District Towns	Communes	Total
Medical Doctor/Medical Assistant	2,118	982	289	3,389
Dentist / Dentist Assistant	145	60	6	211
Midwife	1,128	875	1,288	3,291
Nurse	3,373	2,231	2,640	8,244
Nurse: Anesthesia	42	6	0	48
Dental nurse	52	65	16	133
Laboratory Technician	338	177	71	586
Nurse: eye care	10	0	0	10
Technician RX	18	4	0	22
Pharmacist/Pharmacist Assistant	453	143	16	612
Others	618	148	106	872
TOTAL	9,053	5,059	4,642	18,754

Under-funded government health services in association with inadequate skills, low motivation and very low level of salary (US$10-20 per month) discourage government health workers from improving quality of public services, and encourages them to unofficially charge patients. Low quality public health services, with high and uncertain prices, cause Cambodian patients to self medicate, or to seek care from the expensive, and unregulated private sector, with dubious quality. At the present MoH does not has the resources or the legal support to effectively regulate the private sector.

The low salaries also predisposes the very prejudicial brain drain of the most competent civil servants leaving theirs pots for better-paid jobs in International Organisations or NGOs. Finally, it render supervision more difficult as managers are reluctant to demand too much from under-paid staff, hence jeopardising strict respect for the professional code of conduct, the enforcement of new regulations, and the implementation of the health sector reform as a whole.

The first Health Workforce Development Plan provides framework in which health personnel will be trained and employed over the period of 1996-2005, to meet the need of the new health system development. The most urgent training program priority is to upgrade essential skills of currently employed health worker through in-service training on Minimum Packages of Activity (MPA) consisting of 16 modules in total, and on Complementary Packages of Activity (CPA).

Under Basic Skill Development Project (loan from Asian Development

Bank), 1192 health centers staffs at 165 health centers have received MPA module I training. If adding up these figures with the training funded by NGOs, the total number of MPA module I trained staff was 1241. This figure represents roughly 13% of total HC staff to be trained and 935 of HC to be covered.

The CPA training for referral hospital staff is currently being prepared. This training course is expected to start in June1999.

The CPA training for referral hospital staff is currently being prepared. The training is expected to start in 1999. However, funding for these training remains insufficient.

1.3.3 Health financing

An inadequate supply of funds remains a major obstacle in implementing the policy of the Ministry of Health at all levels of the health system. The three main sources of finance for health sector are government budget, donor funds and local community (See Table 6). The Ministry of Health is working hard to improve the utilisation of both government budget and donor funds to be effective, and at the same time developing cost-sharing partnerships with local communities through user fees.

Table 6: Main sources of finance for health sector

Funding Source	Health Providers	
	Public Sector	Private Sector
Ministry of Health in 1998 (US$ per capita)	US$1.08[a]	
Donors/Lending Agencies in 1998 (in US$ per capita)	US$4.1[b]	Pilot Testing of two contracting models in four operational districts
Household[c] 1997 (US$ per Capita)	US$18.6[d]	

Note:

a: National Health Statistic 1998: Ministry of Health

b: Estimation based on data published by the Council for the Development of Cambodia
- Development Cooperation Report 1997/1998
- Non Government Organizations in Cambodia 1998

c: The health care demand survey carried out by the Ministry of Health in 1996 found that each household spends about 49% of monthly health expenditure in the private sector, and 51% in the public sector. In addition, the Cambodia Socio-Economic Survey 1997 found that the cost of medicines purchased other than from provider was 31.7% of the total household expenditure on medical care.

d: Cambodia Socio-Economic Survey 1997: Ministry of Planning

The Royal Government has shown its commitment in increasing annual budget for 1996 and 1999, and the Ministry of Health has developed a budget allocation formula that complements the health coverage plan. However, a variation in the exchange rate caused by unstable politics and economy has resulted in the government budget devoted to health remaining at only 1 US$ per capita per year. Economic problems and competing government priorities, along with certain problems, have together meant that health managers have been unable to access the full budget approved by the government and national parliament. This problem has particularly occurred at the provincial level where the annual budget implementation in most places is only about 30%-50%.

The financial management capacity of health managers has been strengthened through training on the accounting system and budget expenditure report system. The priority now is to restore government budget management at provincial and district levels in order to ensure existing monthly expenditure and to explore ways to make the current expenditure system to be more efficient and effective.

Donor funded investment and support to the health sector remains considerable. However, donor assistance is not distributed equitably. Some remote provinces such as Preah Vihear, Mondol Kiri, Stueng Traeng, Koah Kong, Krong Preah Sihanouk, and Banteay Mean Chey have been neglected by most potential donors/ lending agencies including the UNICEF, WHO, Bilateral agencies, the World Bank, and ADB.

1.4 Private sector

The private sector is rapidly growing in uncontrolled way. Even though large-scale private sector investment has not yet taken place. The commercial health sector is characterised by large numbers of small, under-capitalised institutions and practices, which appear to be marginal economically. The commercial health infrastructure generally is poorly organised, anarchic, and any if its leaders are suspicious of government intervention and /or regulation. Staffing of the modern private health sector appears to be composed largely of individuals who also work in the public sector

In 1998, .the number of registered privates' clinics, laboratories and support clinic facilities is 330 units in which there are only 395 beds in total. Nevertheless, around 2000 illegal pharmacies were found by the MOH. Some media agencies advertise medical services and pharmaceutical products using misleading information.

Tobacco and alcohol advertising in Cambodia is increasingly aggressive. In 1997, a street sign survey along 18 main streets found that 46% and 38% of 35954 street signs advertised cigarettes and alcohol products respectively using colored prints. Many media agencies including TV and radio advertise these harmful products. Cambodia is the only country with non-existent laws governing tobacco businesses. The legislation of food safety is being prepared.

Legal and regulatory reform is needed, particularly in the area of certification, registration and supervision of private sector medical practitioners and medical facilities including pharmacies and drug sellers. The law on pharmaceutical management exists, but still yet to be reinforced. The MOH is drafting the law code of medical conduct to be submitted to the council of Minister for further approval by the National Assembly.

At village level there are many types of traditional healers, including traditional birth attendants. The traditional healers who employ spiritual and herbal remedies are often consulted, particularly when diseases are believed to be supernatural in origin.

1.5 Coverage of health services

An inadequate government budget for health sector and a low salary results in a lack of motivation of health staff in upgrading the quality of public health services. Because of unclear informal payments for service, the patients opt to use private health care services with high cost and poor quality.

The 1998 National Health Survey (NHS) found that about 14% of all illnesses/injuries, and 10% of those which were moderate are serious in severity, received no treatment at all. The percentage of non-treatment is twice as high among those living in the rural provinces in

comparison to the country overall; almost three times as high in comparison to the capital city. In addition, the most poorest segment of population being more than four times more likely than the most affluent to go without treatment at all. A very high percentage of children under the age of five with acute respiratory infection (ARI) are treated with medicine bought without benefit of consultation with a trained health worker.

Overall, the government sector (as defined by the trained health workers providing services in a government facility or outreach location) is currently utilised in one-fifth of all illnesses/injuries. This percentage increases to one-third when the illness/injury is a serious one. Of patient receiving treatment from the public source, almost half did so at a Provincial or Phnom Penh Government Hospital. A smaller percentage reported treatment at District Hospitals, which is not surprising since not all of these have yet been rendered fully functional. A minimal percentage reported treatment at an actual Health Centre.

Only one third of births to Cambodian women over the last five years did the mother receive antenatal care from a medically trained person. Among women living in remote or isolated rural areas and among women who are poor and/or illiterate, less than one-fifth receive antenatal care from a trained provider. For births to mothers staying in the capital city, the percentage of medical assistance during pregnancy is 83%. In all other parts of the country, the average is only 25%.
Concerning the child health care, the NHS found that children in Phnom Penh have 70% immunisation coverage compared to 17% for those in the most isolated provinces.

1.6 On-going Health Sector Reform

Since 1996, the MOH has undergone organizational and financial reform to strengthen the health system. The reform process is based upon the fundamental principles of equity, through improved access to health care for all of the population, whether by financing policies or the allocation and distribution of health resources and infrastructure. The reform requires a redefinition of roles, functions and criteria for

location of each level of health system, and a health financing policy to improve access and equity of services for the poor. It also requires the integration of all vertical health programs at district and commune level, and the de-concentration of authorities and responsibilities from higher level to district health managers. To date, in the overall framework of health reform, new changes are being executed as follows:

1.6.1 Organizational Reform: the Health coverage plan

Health infrastructure has been recently reorganized from the administrative system to a system based upon criteria of population and accessibility of services. The basic unit of health care is the decentralized "Operational District" coverings the whole population leaving neither neither gaps nor overlaps. It provides a comprehensive primary health care (PHC) package based on the original comprehensive meaning of PHC. It should not be confused with existing administrative districts of the country which are not population or community based. In each operational district there are one District Health Office (DHO), one Referral (RH), and 10-15 health centers. The catchment areas of the facilities should be accessible to the community. Health centers, therefore, should be situated within a radius of 5-10 km, equivalent to 1-2 hours walk. In order to use resources efficiently and maintain professional competency, the health facility needs to maintain a sufficient workload to justify the resource investment. The optimal size of population covered by a health center is estimated as 10,000 and for a hospital, between 100,000 and 200,000 inhabitants. These operational districts are organized so as to become the most peripheral management units for the provision of comprehensive services to the population.

Health centers are staffed with 5-7 people and provide a basic integrated package of health care referred to as the Minimum Package of Activities (MPA). These services are basic preventive, promotive and curative care including prenatal care, immunization, birth spacing, prevention of micronutrient malnutrition, and treatment of acute respiratory infection and diarrhea. Each health center provides outreach services to local communities. Each health center will have a joint

community co-management committee where local community representatives have responsjbility for overall management of the health center.

The RH receives cases refereed from the health centres and manages complicated cases, operations, inpatients, serious illnesses requiring admission etc. Such services are referred to as the Complimentary Package of Activities (CPA).

Both the referral hospital and the health centers thus meet the communities basic health needs and are managed as a single system of health care. At its most basic, such a system can provide a pregnant women with good ante-natal; provide good delivery care; manage any complications as they arise; if a complicated delivery, correctly manage and refer (transport) that woman to the referral hospital for safe delivery and if medically indicated a safe caesarian section. Thereafter returning a healthy mother and child to her home in her village and provide follow up care and contraceptive advice. The concept is thus holistic and meets an individual basic but comprehensive needs from the home to the hospital.

Based on the new health system, the 1996 health coverage plan needs 67 referral hospitals, 935 health centers and 8 national hospitals for the health system in the whole country. As of 31 July 1998, 67 operational districts have organized their management structure, 272 health centers have been delivering Minimum Package of Activity and 24 referral hospitals have delivered the Complementary Package of Activity.

1.6.2 Financial Reform

Health financing reform focused on specific factors such as improvement of equity in budget distribution based on certain formula. Budget allocation was provided to each health facility according to the degree of service's activities and number of population served. A mechanism for direct release of funds on a cash imprest system on a fixed and regular basis has been tested and evaluated for the direct release of cash to 12 Operational Districts in 1996 and it was expanded to 25 districts in 1998. Under the previous system a district wishing to buy ice to the value of $2-00 to un-

dertake an immunisation programme in villages had to obtain up to 40 authorising signatures. Under this new budget line, known as the Chapter 13, a district has the cash up front and accounts for the activities as completed. Not surprisingly this has had a major impact on decentralised management and quality of services.

Since 1996, the "health financing charter" jointly approved by the MOH and the Ministry of Economy and Finance (MoEF) has guided the pilot of different models of health financing scheme, particularly user fee system. The charter ensures community participation in using and managing services to protect the poor. The Ministry of Health also recognizes the importance of the private sector in the provision of health services in Cambodia. Since 1999 this new public-private partnership was tested through a number of initiatives including the contracting of NGOs to manage some health districts, or to provide public health services in some districts..

1.6.3 Human Resources Development Reform

Human Resource Development (HRD) is one of the main three components of the Cambodia Health Care System Reform (HCSR). The implication of HRD activities with the process of the reform entails all three aspects of HRD: planning, training, and management. The ministry of Health will ensure that the change in HRD is in consistence with the overall public administrative reform of the country as well as the HCSR.

The first most important element of HRD change is the development of the first Health Workforce Development Plan 1996-2005, which was adopted in May 1997. Before this date there has been no clear idea in terms of health worker supply and requirement. The formulation of this plan, in line with reform policies, timely responded to the need of HCSR, which required information on health worker situation and projection within a timeframe of the reform. The health worker projections took into account au factors affecting the demand and the supply of all health workforces in the country. The production of health professional has been based on this plan. The implementation of the plan started in 1997 and it was reviewed in May 1999 so as to

keep the plan rolling and updated.

Change is also seen in the area of training. The restructuring of th health care system requires health workers' possession of skills t manage the change, i.e skills to deliver services according to th new health system. With respect to basic training, priorities ar given to improvement of curriculum, training techniques and ori entation towards primary health care approach. The number of in takes is based on the Health Workforce Development Plan 1996 2005. For continuing training, emphasis is put on training pack ages called Minimum Package of Activities (WA) for health cente level and Complementary Package of Activities (CPA) for referra hospital level. These skills cover both technical and manageria aspects. Priorities are also given to post-basic and post-graduat training encompassing training on clinical and para-clinical spe cialties, public health, management and epidemiology.

The HCSR is also in need of the improvement of health worker situa tion in line with the reform policies and strategies of the governmen and the Ministry of Health. This is in accordance with the policy o the National Public Administrative Reform. It covers a variety of top ics including the establishment or strengthening of the staff selectio and recruitment system- job description; staff motivation- the systen of reward and sanction; information and research. Since the startin date of the reform implementation, the HR management reform ha been geared towards this direction. For example, staff recruitment wil be based on competing examination before being admitted to the gov ernment services instead of being automatically employed in the Gov ernment sector after graduation Similarly, staff reward and sanctio system is highlighted in the MoH Human Resource Policies and en hanced. In addition, integrated personnel-HRD database system is be ing developed in the Ministry of Health for staffing and training man agement.

Part 2
National Health Policy and Strategies 1999-2003

2.1 Health policy

The policy of the Royal Government of Cambodia for health sector has the following priorities:

- Provision of basic health services to all people with involvement of community participation,
- Decentralization of financial and administrative function,
- Human resource development,
- Introduction of competition among public and private sector based on technology and professional ethics,
- Promotion of people ' s awareness of health care providers qualifications and healthy lifestyle ,
- Promotion of health legislation,
- Special attention to control and prevention of communicable diseases, women and child health, and taking into account priorities such as elderly and disabled people, mental health, eye care and oral health,
- Strengthening health information system.

2.2 Goal and objectives of health sector development

The overall goal of the Ministry of Health is to promote people's health enabling them to participate in the development of the socio-economic sector and reduce the poverty in Cambodia.

The objective of the Ministry of Health is to improve equity and accessibility to basic health services with good quality, efficiency and low cost in order to assure the sustainability of its functions, and to protect the poor.

2.3 Main strategies

In order to achieve the goal and objectives mentioned above, the Ministry of Health set up specific health strategies below:

- Promote women and child health through basic care service delivery for all women such as antenatal care, delivery and postnatal services, reproductive health services such as birth spacing, good nutrition, safe delivery, and personal and family hygiene practice. Promote immunization and curative care coverage for children.
- Reduce incidence of communicable disease such as malaria, dengue fever, tuberculosis, diarrhea disease, acute respiratory infection, and sexually transmitted disease, particularly HIV/AIDS.
- Improve coverage of public health service with good quality and efficiency for people throughout country through the provision of MPA at health centers and CPA at referral hospitals.
- Upgrade the professional capacity of government health staff to ensure the effectiveness and efficiency of the health system, through planning, revision of basic training, and expansion of continuing training to health staff on clinical techniques and management.
- Ensure appropriate supply of drugs, equipment and materials to the public sector, in conformity with actual needs of the system. Ensure effectiveness of the provision of health care service through drug distribution system reform and improvement of management and utilization of drugs and materials.
- Upgrade capacity of technology and management of referral hospitals in the whole country, including improvement of the referral system.
- Re-enforce the full participation of private sector in the delivery of health service to people by motivating and controlling the private sector to become a true partner of the Ministry of Health.

- Promote awareness of the population about the qualification of all types of services, public and private sectors. Facilitate the population to understand and practice good hygiene practices.
- Improve the ability of laws relating to health sector to be effective by re-enforcing the collaboration with other relevant institutions in implementing these laws, and by legislating new regulations according to the actual needs of the health system development. Develop and strengthen laws and standards of medical services, food safety, cigarettes-drug business etc.
- Upgrade health management through health system reform with a clear defined role at each level, appropriate decentralization, various standardized trials of health financing schemes, aid coordination, planning, monitoring and evaluation.
- Upgrade the policy development, survey-study and extension of health information system.

Part 3
Summary of the Ministry of Health Investment Programs

The proposed PIP 2000-2003 has been designed to help attain the Government's health sector objectives through financial and technical support. Several key strategic choices have been agreed identified in order to attain the best fit and maximize the sustainability and impact of the investments.

3.1 Purpose, approach, methodologies, and scope

The proposed PIP 2000-2003 has been designed to help attain the Government's health sector objectives through financial and technical support. Several key strategic choices have been agreed identified in order to attain the best fit and maximize the sustainability and impact of the investments. The programs has opted for a two track approach of public health programs – previously recognized as vertical programs - and health system strengthening. The existing vertical/public health programs will be directed by National Institutions and integrated at district level and below. Therefore these program will be highly dependent on the basic service delivery structure at the health coverage plan. Given the transition of health sector reform, the PIP will support both tracks to ensure the success of both the public health programs and the rehabilitation of basic health services. The PIP will also take into account emerging priorities and development of medical technology through strengthening hospital services.

3.2 Investment components

Therefore, there will be four areas for investment focuses:

- Strengthening Health System through:
  - Strengthening Health Management and Planning
  - Strengthening Basic Health Services
  - Human resource Development
  - Infection Control
  - Reform of Pharmaceutical Management
- Existing health programs and others, which are being developed, which will be provided in the integrated manner at operational

districts, especially at health centers:

- Tuberculosis control
- Control of Malaria, Dengue Heamorrhagic Fever and schistosomiasis
- Control of AIDS/STDs
- Immunization programs
- Women and child health programs
- Elimination of leprosy

- Preparedness and response to emerging priorities
  - Strengthening Medical Specialty for ENT, Oral, and mental health
  - Development of Health Education
  - Cancer Prevention
  - Blindness Prevention
  - Strengthening National Laboratory for controlling food and drug administrations
- Rehabilitation, upgrading capacity of technology at national and Provincial hospitals and expansion of blood transfusion service at referral hospitals over the country

3.3 Monitoring and Evaluation

Most basic indicators have been defined, and will be measured. In addition to the overall health indicators, specific performance goals and objectives have been defined and will be used for monitoring and evaluation. Selected indicators for monitoring and evaluating overall program implementation progress and results are described in table 7.

Table 7: Selected Health Indicators: Baseline and Target for 2001 and 2003

INDICATORS	UNIT	1998	2001	2003
Maternal Mortality Rate per 100,000 lives births	Person	473	300	200
Infant Mortality Rate	‰	89.4	70	65
Mortality Rate of children under 5	‰	115	100	90
Children under 5 moderately or severely under-weight	%	49%	40%	35%
Consultation Rate of 1st visit of ANC	%	30%	40%	50%
Delivery assisted by health staff or TBAs	%	50%	70%	85%
Prevalence Rate of Birth Spacing	%	16%	20%	30%
Proportion of Infants receiving routine vaccination	%	70%	>80%	>80%
Proportion of Adult Population understanding AIDS	%	80%	90%	>90%
Cure Rate of Tuberculosis	%	89%	>90%	>90%
Detection Cases of TB(new case)	Person	13,173	14,000	14,000
Prevalence of Leprosy	‰	13.5	Eradicate	Eradicate
Incidence of Malaria Patients treated at public services	‰	7.04	6.0	4.0
Fatality Rate of Dengue Hemorrhage Fever (per 100 patients)	%	2.0	<1.5	<1
Health center provided MPA	%	42%	70%	100%
Health centers provided Birth spacing services	%	70%	80%	100%
Referral hospitals provided major and medium surgeries	%	35%	77%	90%
Number of Contacts by Inhabitant per year in public sector	Time	0.3	0.5	0.7
Bed Occupancy Rate	%	47%	60%	80%
Population	Million pop.	11.4	12.2	12.7
Growth Rate	%	2.4	1.9	1.8

3.4 Cost estimates for public investment programs 2000-2002

The total cost of the Public Investment Program for Health Sector is estimated at US$ 522.92 million equivalent. The total costs are summarized by project in Table 8, and by expenditure categories and funding source in Table 9. Investment costs are estimated at about 48.1% of total costs. The estimation base on the assumption that the Government Budget devoted to the Ministry of Health will be increased from 1% of Gross Domestic Product in 1999 to 2% in 2002 (Table 10). In particular, the MOH 2000 budget will be US$ 49.17 million, including running costs (US$ 33.01 million), investment cost (US$ 14.73 million) and counterpart fund (US$ 1.43 million).

Table 8 show that US$ 145.16 million still yet to be committed by donors/lending agencies to close the resource gap for the implementation of the PIP2000-2002.

TABLE 8: PUBLIC INVESTMENT PROGRAMS 2000-2002 : FUNDING SOURCES (IN THOUSAND US$)

	PROJECT AREA	Cost	Funding Source					Full Gap	Gap (% to cost)
			Govt. financing	Loan	Grant	Self-Revenue	Total identified		
	Strengthening Health system	***362,810***	***189,834***	***26,468***	***102,412***	***1,200***	***319,914***	***42,896***	***11.8%***
1	Strengthening Health Management and Planning (SH3)	62,149	34,876		19,152		54,028	8,121	13.1%
2	Strengthening Basic Health Services (BH1)	277,753	151,492	25,503	81,950	1,200	260,146	17,607	6.3%
3	Human Resource Development (HR4)	6,972	866	964	194		2,024	4,948	71.0%
7	Reform of Pharmaceutical Sector/Provision of Essential Drugs & Consummables (ED7)	10,532	2,450				2,450	8,082	76.7%
13	Elimination of Leprozy Case (LEP11)	2,532			1,116		1,116	1,416	55.9%
4	Infection Control (IN12)	2,872	150				150	2,722	94.8%
	Priority Program for delivery through revitalising Basic Health service	***101,454***	***9,496***	***6,322***	***13,671***	***1,500***	***31,189***	***70,265***	***69.3%***
5	Tuberculosis Control (TB5)	12,812	1,710	878	2,321		4,909	7,903	61.7%
6	Control of Malaria , Dengue Heamorhagic Fever & Schistosomiasis (MA6)	8,845	1,650	2,187	2,300		6,137	2,708	30.6%
8	AIDS/STDs (AI9)	41,988	2,896	3,257	2,220		8,373	33,615	80.1%
9	Expanded Program on Immunization and Polio Eradication (EPI14)	11,082	790		1,200		1,990	9,092	82.0%
10	Women and Child Health (MC2)	28,727	2,450		5,830	1,500	9,780	16,947	63.4%
	Emerging Priorities	***28,314***	***5,634***	***49***	***4,175***	***3,156***	***13,014***	***15,300***	***54.0%***
11	Medical Speciality for Ent, Oral & Mental Care (NO15)	4,884	1,100		1,524		2,624	2,260	46.3%
12	Development of National Institute of Public Health (NIPH16)	4,845	901	49	1,400	2,350	4,700	145	3.0%
14	Development Health Education, Hygiene and Primary Health Care (HEP18)	4,736	1,073		1,173		2,246	2,490	52.6%
15	Cancer Prevention Program (CPP19)	1,180	370			70	440	740	62.7%
16	Prevention of Blindness	5,735						5,735	100.0%
17	Strenthening the National Laboratory for Controling food and drug administration	6,934	2,190		78	736	3,004	3,930	56.7%
	Rehabilitation of National Hospitals and Expension Provincial Blood Bank Centers	***30,343***	***9,251***	***339***	***4,050***		***13,640***	***16,703***	***55.0%***
18	Blood transfusion Program (BLO17)	4,150	951	339			1,290	2,860	68.9%
19	Rehabilitation of National Hospitals (NH10)	26,193	8,300		4,050		12,350	13,843	52.8%
	Total approved by RGC	*522,920*	*214,215*	*33,177*	*124,508*	*5,856*	*377,757*	*145,163*	*28%*
			57%	*9%*	*33%*	*1.6%*	*100%*		

TABLE 9: PUBLIC INVESTMENT PROGRAMS: SUMMARY OF FINANCIAL PLAN FOR HEALTH SECTOR

	1998 Budget	1998 Actual	1999 Budget	2000 Estimate	2001 Estimate	2002 Estimate	2000-2002 US$000	2000-2002 %
A TOTAL COSTS	93,781	54,945	122,761	153,890	172,980	196,050	522,920	100.0%
Current Expenditure	27,016	15,794	47,079	67,658	90,405	113,327	271,390	51.9%
Capital Expenditure	66,764	39,152	75,682	86,232	82,575	82,723	251,530	48.1%
B IDENTIFIED FUNDING SOURCES	68,697	54,945	95,388	111,598	121,592	144,568	377,757	100.0%
Self-generating revenue	57	57	1,376	1,475	1,945	2,436	5,856	1.6%
Government Financing	16,855	12,324	29,332	49,171	70,149	94,895	214,215	56.7%
Loans	9,124	3,628	11,190	12,525	11,227	9,426	33,177	8.8%
Grant	42,661	38,936	53,490	48,426	38,271	37,811	124,508	33.0%
C FUNDING Gap (A-B)	25,084	0	27,373	42,292	51,389	51,483	145,163	
D FUNDING Gap (C/A) in %	26.7%	0.0%	22.3%	27.5%	29.7%	26.3%	27.8%	

TABLE 10: Government Budget Devoted to Health Sector and Macro-economic Trend

	1998	1999	2000	2001	2002
Population in thousand inhabitants	11,300	11,600	11,900	12,233	12,575
Nominal GDP in Million US$	2,973	3,600	4,094	4,490	4,904
Nominal GDP per capita in US$	263	310	344	367	390
Total National Budget (Plan) (in millon US$)	282	427	450	500	550
Exchange rate (riel per US$)	3,700	3,500	3,500	3,500	3,500
Health Budget (Planned running cost)					
In million US$	17.82	30.03	40.94	67.23	98.71
US$ per capita	1.58	2.59	3.44	5.50	7.85
% of nominal GDP	0.60%	0.83%	1.00%	1.50%	2.01%
% of total government budget	6.3%	7.0%	9.1%	13.4%	17.9%
Health Expenditure in US$ per capita	1.03				