Health Care Expenditure and Financing in Taiwan

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EXECUTIVE SUMMARY

1. This research report provides a description of the health care system in Taiwan and an analysis of its expenditure pattern and financing arrangement.

2. The objective of health care financing arrangement in Taiwan is to provide universal insurance coverage for its population. The National Health Insurance (NHI) Programme is therefore compulsory. To encourage conscientious use of medical resources, a co-payment scheme is introduced.

3. Financing of health care services in Taiwan is sourced directly from the Government, directly from the private sector, and indirectly from insurance premium through the Bureau of National Health Insurance (BNHI), a Government agency which collects premiums from the insured, employers and the Government as a third party contributor.

4. Government health care financing is the allocation of Government funds used to finance those medical services not covered by health insurance programmes, public health education, research and development, administrative cost and staff cost. The Government does not impose any tax for these purposes; funds come from general tax revenue.

5. Private health care financing is used to finance part of the medical cost (in the form co-payments) and those medical services not covered by health insurance programmes.

6. The NHI Programme is an insurance system which collects premiums from the Government and the private sector. The BNHI therefore finances health care services indirectly with the premiums thus collected. With the NHI Programme, both Government health care financing and private health care financing fell. However financial data did not include premiums paid to the BNHI.

7. The NHI Programme has been implemented for three years. While it may be too early to make an overall assessment over the NHI Programme, the NHI Programme has larger coverage in population, health care services, and health and medical care institutions.

8. Although the BNHI had surpluses in the first two years of operations, there would be pressures on its finance in the future due to the rapid increase in medical expenses. In addition, the co-payment amounts constitute only a small proportion of the medical cost, which may not be enough to deter mis-use of medical services.

9. The major concern in the implementation of the NHI Programme is that premium contribution would be an additional burden for the taxpayers as both the insured and the employers have to contribute to the Programme.

10. Another concern is that a government department has to be set up to run the insurance programme. Medical experts have to be recruited to ensure the provision of sufficient health and medical care services while others are needed to assess the level of premiums and medical expenses. This may have manpower implications in the industries involved.

11. In these aspects, the Taiwan experience may be able to offer some lessons to places which decide to move towards a centralized insurance system.

HEALTH CARE EXPENDITURE AND FINANCING IN TAIWAN

PART 1 - INTRODUCTION

1. Background

1.1 The Provisional Legislative Council (PLC) Panel on Health Services requested the Research and Library Services Division (RLS) of the Provisional Legislative Council Secretariat to research on health care expenditure and financing in Hong Kong and its comparisons with overseas countries/territories. This research study concentrates on the health care expenditure pattern and financing arrangement in Taiwan.

2. Objective and Scope

Objective

2.1 The objective of this research is to describe the health care system in Taiwan and analyze its expenditure pattern and financing arrangement.

Scope

2.2 The scope of the research is as follows :

- describe the health care system in Taiwan;
- describe and analyze changes in the expenditure pattern of the health care system in Taiwan; and
- describe and analyze the health care financing arrangement in Taiwan, with particular emphasis on the centrally managed insurance system.

2.3 Part 2 of this paper describes the health care system in Taiwan while Part 3 concentrates on the health care financing arrangement. Part 4 describes the National Health Insurance Programme in greater detail. Part 5 analyses the health care expenditure pattern and its financing. Part 6 assesses the centrally managed insurance system and Part 7 is the conclusion.

3. Methodology

3.1 To obtain the necessary information, enquiries were sent to the Taiwan Department of Health (DOH) and the Bureau of National Health Insurance (BNHI). Information was also obtained from the Internet - the homepages of the DOH and the BNHI. Relevant materials and statistics were obtained from the Kwang Hwa Information and Culture Center in Hong Kong.

3.2 In this report, the figures quoted are mostly in New Taiwan Dollar (NT$). The average exchange rates of the New Taiwan Dollar in 1996 and 1997 were NT$1.00=HK$0.274 and NT$1.00=HK$0.263 against the Hong Kong dollar while those against the US dollar were NT$1.00=US$0.0354 and NT$1.00=US$0.0340.

PART 2 - HEALTH CARE SYSTEM IN TAIWAN

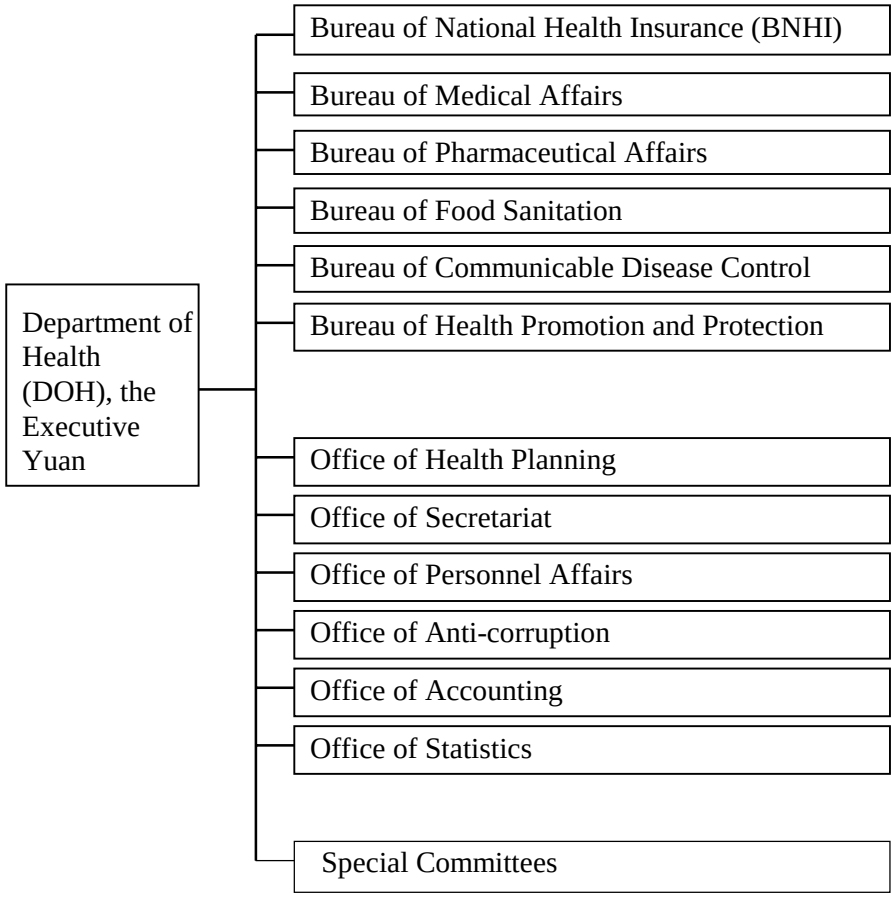
4. The Health Care System

4.1 The health care system in Taiwan is characterized by centralized management. The Department of Health (DOH) of the Executive Yuan formulates health policies and supervises the delivery of health services. The National Health Insurance Programme provides centralized health insurance for more than 90% of the population. The public sector plays a major role in the delivery and financing of the health care services.

Department of Health

4.2 The DOH is headed by a Director-General, who is appointed by the President of Taiwan. The DOH is divided into six bureaux, six offices and 24 special committees (Figure 1).

Figure 1 - Organization Chart of the Department of Health



Source : DOH, Public Health in the Republic of China

Objectives and Policies

4.3 The objectives of the DOH are to make accessible to every citizen health and medical care services by reducing financial barriers, to upgrade the quality of health and medical care services, to balance the development of health and medical care resources in various areas, and to promote the growth of health and medical care manpower at a reasonable rate.

4.4 These objectives are set in response to population growth and economic development. The population has been growing steadily at slightly less than 1% during the 1990s. Of this, the population aged between 15 years and 64 years grew at a higher rate of around 1%, hence a falling dependence ratio. At the same time, Taiwan has experienced stable economic growth, which provides an environment for its citizens to pay greater attention to health care. Appendix I and Appendix II show detailed trends of demographic changes whereas Appendix III and Appendix IV show detailed indicators of economic development.

4.5 To achieve these objectives, the DOH set up a regional health and medical care network, provided training programmes, and implemented the National Health Insurance (NHI) Programme.

Major Features of the Health Care System

4.6 The health care system in Taiwan has the following major features:

1. Taiwan is divided into regions and sub-regions to allow for a more balanced distribution of health and medical care resources;

2. the Government conducts a number of training programmes for health and medical care personnel;

3. the provision of a wide range of health and medical care services, including Chinese medicine and preventive medicine services; and

4. the health care system is financed by a centrally managed insurance programme, namely the NHI Programme.

Medical Care Network

4.7 A project entitled *Establishment of Medical Care Network* was initiated in July 1985 to tackle the problem of uneven distribution of medical resources in different regions. Economic development in major cities that took place in the 1960s and the 1970s aggravated the problem.

4.8 The project divided Taiwan into a medical care network of 17 regions, aimed to decentralize the process of delivery. A medical care region is the basic unit for the development of medical care manpower and facilities. To ensure a balanced distribution of health and medical care resources, the 17 medical care regions were further divided, based on population and transport facilities, into 63 sub-regions. With the enactment of the Medical Care Act in 1992, the establishment of hospitals in areas with relatively abundant medical resources has been restricted. In 1994, a Medical Care Development Fund was set up to assist the private sector to establish medical institutions in areas with relatively poor resources by subsidizing the interests on loans required to establish such institutions.

4.9 In line with the establishment of the medical care network, health and medical care institutions are categorized, in descending order in terms of size and facilities, into medical centre, regional hospital, district hospital and local clinic. Table 1 shows the number of these health and medical care institutions.

Table 1 - Number of Health and Medical Care Institutions (as at end of period)

	TOTAL	Medical centre (Government)	Regional Hospital (Government)	District hospital		Clinic (mostly private)
				Government	Private	
1991	13,661	13	44	94	670	12,840
1992	14,468	13	44	94	671	13,646
1993	15,062	14	46	94	656	14,252
1994	15,752	13	45	98	672	14,924
1995	16,109	14	44	95	634	15,322

Source : Department of Health (DOH), Public Health in the Republic of China

4.10 A medical centre is the largest type of medical institution in Taiwan in terms of size and facilities. It is followed by regional hospital. Apart from size and facilities, medical centres and regional hospitals provide a greater variety of medical services. Both types of medical institutions are usually located in major cities and are run by the Government. The next level is the district hospital, most of which are run by the private sector (Table 1). The lowest level is the clinic, almost all of which are run by the private sector.

4.11 In summary, while the Government is responsible for the provision of general medical services and more sophisticated services in major cities, the private sector supplements it by providing less sophisticated services and in less developed areas. In addition, the private sector provides medical services which are not provided by the Government. Examples of these services include non-medically required cosmetic surgery, in vitro fertilization, and trans-sexual surgery.

Regulation of Health and Medical Care Providers

4.12 To ensure the quality of medical services, a hospital accreditation system was launched in 1978. Under this accreditation system, the difference in quality between hospitals (including Government-run and privately-run hospitals) is narrowed. Hospitals are evaluated on the basis of the quality of personnel, facilities, hospital management, as well as the quality of medical care in various departments including surgery, radiological diagnosis, laboratory tests, nursing care, pharmaceutical services, ward management, emergency care, and psychiatric care. The accreditation is valid for three years, after which the hospital must apply for re-assessment. For hospitals which are not able to obtain a three-year accreditation, they may be accredited for one year and reviews take place annually.

4.13 Clinics are not subject to accreditation procedures, but must apply to local health authorities for an operating licence. The requirements for issuing such a licence are set by the local health authorities. These include standards for the quality of medical care facilities and for the level of medical staff. Once clinics obtain their operating licenses, they are subject to periodic inspections.

Role of the Government and the Private Sector

4.14 In sum, the major roles of the Government in the health care system are the administration of the health care system and the health insurance system, the provision of health and medical care services, the provision of health care training programmes, and the promotion of public health. At the same time, the private sector supplements the Government by providing health and medical care services at less sophisticated levels, mostly in less developed areas and services which are not provided by the Government.

Training Programmes of Health Care Personnel

4.15 A national public health training centre was established in 1987 in collaboration with the National Taiwan University to offer training programmes to health administrators and health workers at various levels to improve their professional skills and knowledge in public health (Table 2). Participants include doctors, dentists, nurses, psychiatrists, physicians, pharmacists, and public health administrators.

Table 2 - Number of Training Courses

	1991		1992		1993		1994		1995	
	Class	Person	class	person	Class	person	class	Person	class	person
Total	12	321	16	447	25	797	22	763	22	759
Basic public health	3	86	3	84	2	61	2	65	2	67
Topic-oriented	9	235	13	363	23	736	20	698	20	692

Remark : A detail breakdown of topic-oriented courses is found in Appendix V.
Source : DOH, Health and Vital Statistics 1996

4.16 The training programmes aim to improve the health workers' understanding of current health policies and the problems encountered, improve their knowledge and skills in implementing health programmes, enhance the communication between health workers of different disciplines and at different levels, and upgrade the overall quality of health manpower. Most of these training programmes and courses are provided to health and medical care personnel free-of-charge. However, there are no separate figures for the amount spent on these training courses; thus comparison to the total health care expenditure cannot be made.

Delivery System

Health and Medical Care Services Provided

4.17 A wide range of health and medical care services is provided by the Government and private hospitals. These services include in-patient, out-patient, emergency care, dental care, Chinese medicine care, pharmaceutical care, home health care, psychiatric care, laboratory and x-ray services, physical therapy, and haemodialysis (Table 3). In addition, some preventive medical services are provided to some particular target groups. These health and medical care services are covered by the NHI Programme.

Table 3 - Health and Medical Care Services Provided in Taiwan

Provider	Type of services	Target patients
Government + Private sector	In-patient	all residents; no particular target patients
	Out-patient	all residents; no particular target patients
	Emergency care	all residents; no particular target patients
	Dental care	all residents; no particular target patients
	Chinese medicine care	all residents; no particular target patients
	Pharmaceutical care	all residents; no particular target patients
	Home health care	all residents; no particular target patients
	Psychiatric care	all residents; no particular target patients
	Laboratory and x-ray	all residents; no particular target patients
	Physical therapy	all residents; no particular target patients
	Haemodialysis	all residents; no particular target patients
	Child delivery	pregnant women
	Preventive medical services :	
	• *pap smear*	• *women aged 30 years and above*
	• *physical examination*	• *two groups :* ☞ *people aged between 40 years and 64 years: once every three years; and* ☞ *people aged 65 years and above: once a year*
	• *pre-natal and post-natal care*	• *pregnant women*
	• *baby examination*	• *children under four years of age*

Sources : BNHI, Internet Homepage - http://www.nhi.gov.tw/
DOH, Internet Homepage - http://www.doh.gov.tw/

4.18 Tables 4-6 show some health indicators in Taiwan. Table 4 shows that the mortality rate in Taiwan has been falling and life expectancy has been increasing. Table 5 shows that health and medical care resources have been increasing while Table 6 shows the ten leading causes of death in Taiwan in 1995.

Table 4 - Infant and Maternal Mortality Rates, Life Expectancy at Birth and Per Capita Living Space

	Mortality rate (number of deaths per 100 000 new births)		Life expectancy at birth		Per capita living space (sq. ft.)
	Infant	Maternal	Male	Female	
1971	1 551	39.69	67.19	72.08	97.2
1972	1 402	34.72	67.56	72.30	108.0
1973	1 408	40.33	67.57	72.48	122.4
1974	1 294	32.35	67.80	72.76	133.2
1975	1 257	24.75	68.27	73.42	147.6
1976	1 060	29.53	68.70	73.59	156.4
1977	1 147	29.56	68.69	73.85	162.5
1978	991	22.48	69.15	74.32	174.3
1979	955	17.28	69.36	74.47	183.2
1980	983	16.66	69.56	74.54	191.8
1981	986	19.38	69.74	74.64	201.1
1982	808	19.06	69.86	74.86	211.1
1983	764	17.01	69.90	75.08	220.0
1984	686	14.06	70.46	75.53	228.9
1985	678	9.85	70.82	75.81	232.9
1986	629	9.41	70.97	75.88	245.0
1987	508	8.94	71.09	76.31	259.3
1988	534	9.09	70.99	76.21	267.1
1989	571	12.72	71.10	76.48	277.1
1990	527	11.94	71.33	76.75	288.9
1991	505	7.78	71.83	77.15	295.4
1992	518	6.85	71.79	77.22	308.9
1993	480	8.92	71.62	77.59	313.2
1994	507	8.05	71.83	77.82	326.8
1995	543	7.59	71.93	77.79	336.8

Source : DOH, Health and Vital Statistics 1996

Table 5 - Availability of Health and Medical Care Resources (as at end of period)

	Area served by each health & medical facility (km^2)	Number of persons served by each health & medical facility	Area served by each physician (km^2)	Number of persons served by each physician	Number of persons per hospital bed
1971	5.1	2 087	4.6	1 892	619
1972	5.0	2 119	4.5	1 900	589
1973	4.8	2 050	4.3	1 844	542
1974	4.4	1 912	3.9	1 686	558
1975	3.9	1 732	3.4	1 492	526
1976	3.9	1 748	3.2	1 437	503
1977	3.7	1 733	3.0	1 377	444
1978	3.6	1 711	2.9	1 360	464
1979	3.5	1 663	2.7	1 314	477
1980	3.3	1 624	2.7	1 323	446
1981	3.2	1 610	2.6	1 318	408
1982	3.1	1 575	2.5	1 272	342
1983	3.0	1 556	2.5	1 268	324
1984	3.0	1 559	2.4	1 243	302
1985	3.0	1 553	2.1	1 130	258
1986	3.0	1 608	2.0	1 086	239
1987	3.0	1 613	1.9	1 016	228
1988	3.0	1 629	1.7	967	225
1989	2.9	1 639	1.7	965	232
1990	2.8	1 578	1.6	913	228
1991	2.6	1 505	1.5	870	222
1992	2.5	1 434	1.4	831	215
1993	2.4	1 394	1.4	802	208
1994	2.3	1 344	1.3	776	204
1995	2.2	1 326	1.3	777	190

Source : DOH, Health and Vital Statistics 1996

Table 6 - Ten Leading Causes of Death, 1995

Cause of Death	Number of deaths			Share		
	Total	Male	Female	Total	Male	Female
ALL CAUSES	117 768	73 047	44 721	100.0%	100.0%	100.0%
Malignant neoplasm	25 788	16 616	9 172	21.9%	22.8%	20.5%
Cerebrovascular disease	14 117	8 301	5 816	12.0%	11.4%	13.0%
Accidents and adverse effects	12 963	9 683	3 280	11.0%	13.3%	7.3%
Heart disease	11 207	6 569	4 638	9.5%	9.0%	10.4%
Diabetes mellitus	7 223	3 306	3 917	6.1%	4.5%	8.8%
Chronic Liver disease and cirrhosis	4 456	3 322	1 134	3.8%	4.6%	2.5%
Nephritis, nephrotic syndrome and nephrosis	3 515	1 909	1 606	3.0%	2.6%	3.6%
Pneumonia	3 068	1 984	1 084	2.6%	2.7%	2.45
Hypertensive disease	2 613	1 340	1 273	2.2%	1.8%	2.9%
Bronchitis, emphysema and asthma	1 990	1 270	720	1.7%	1.7%	1.6%
All other causes	30 828	18 747	12 081	26.2%	25.7%	27.0%

Source : DOH, Health and Vital Statistics 1996

PART 3 - THE HEALTH CARE FINANCING ARRANGEMENT

5. Development of Health Care Financing Arrangement

5.1 The Taiwanese Government's purpose of health care financing is to provide universal insurance coverage for the population in Taiwan via the NHI Programme. The NHI Programme, launched on 1 March 1995, is a compulsory health insurance programme which was formed by merging all insurance programmes which existed before 1995.

5.2 Before the launch of the NHI Programme on 1 March 1995, there were a number of centrally managed health insurance programmes. The first was the Labour Insurance Programme, introduced in 1950. It was followed by the Government Employees Insurance Programme implemented in 1958 and the Farmers Insurance Programme in 1989. There were also a number of other small insurance programmes.

5.3 These programmes together covered 59.4% of the population as at end-1994 (Table 7). In other words, 40.6% of the population lacked health insurance coverage. These were mostly children and the elderly, who were in need of health and medical care but lacked financial means.

Table 7 - Coverage of Various Insurance Programmes Prior to the Implementation of the NHI Programme (as at end 1994)

Programme	Number	Share
Government Employees Insurance Programme	1 796 793	8.5%
Labour Insurance Programme	8 415 224	39.7%
Farmers Insurance Programme	1 740 653	8.2%
Other social insurance programmes	626 382	3.0%
Sub-total : Population covered by insurance programmes	12 579 072	59.4%
Uninsured population	8 617 133	40.6%
TOTAL	21 196 205	100.0%

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

The National Health Insurance (NHI) Programme

5.4 The objective of the NHI Programme is to reduce personal financial burden and provide every citizen with comprehensive medical services in times of illness, injury, or child-bearing. The NHI Programme is run by a **government agency** under the DOH, namely the Bureau of National Health Insurance (BNHI). Tax deductible premiums are paid on a monthly basis by the insured, employers and the Government.

6. Financing of Health Care Services

6.1 Figure 2 shows that the sources of financing of health care services in Taiwan comprise:

- the Government;
- individuals and employers (i.e. the private sector); and
- the insurer, namely the BNHI.

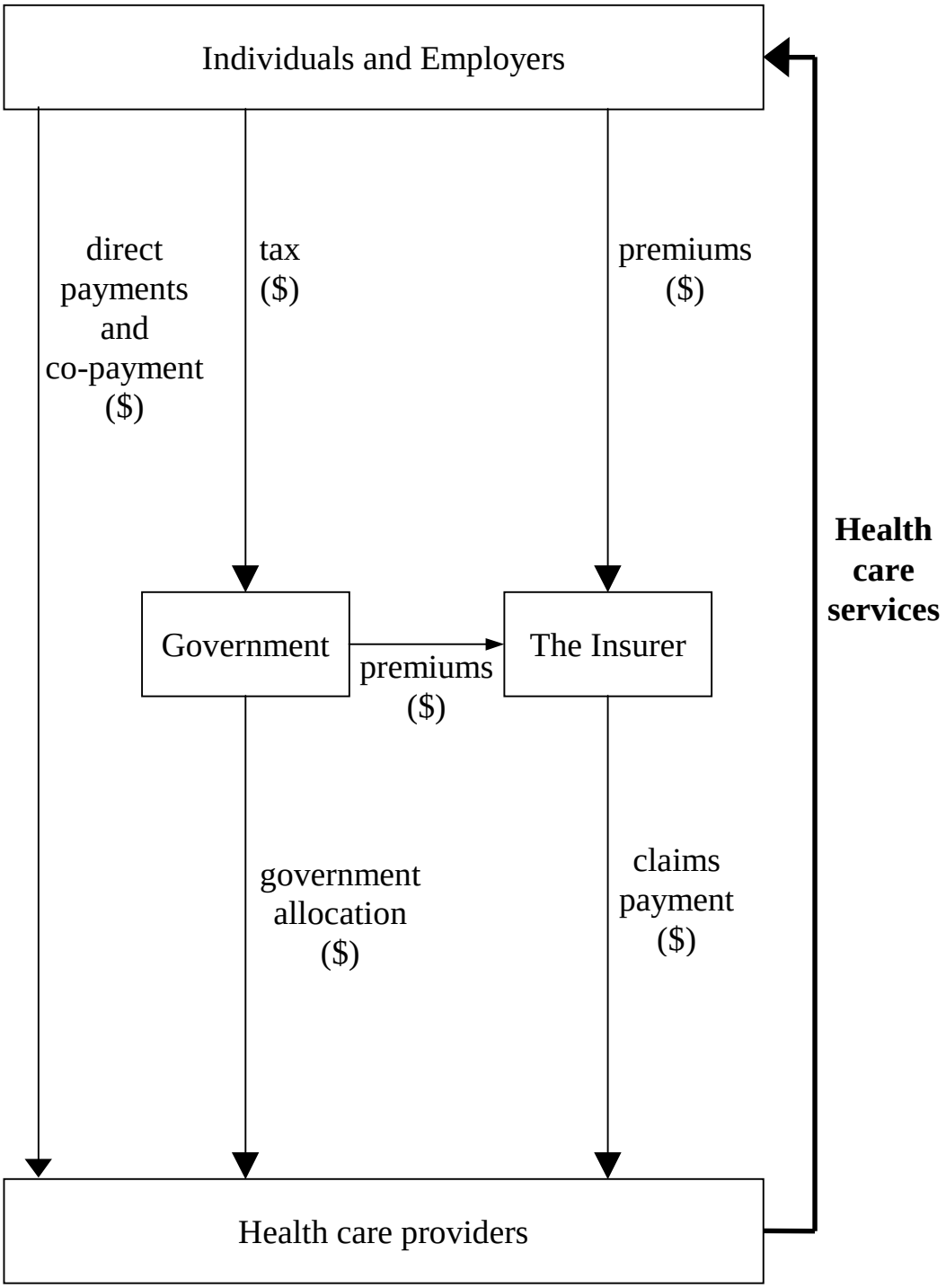
6.2 Government health care financing refers to the funds allocated by Government for medical services not covered by health insurance programmes[1], health care training programmes, public health education, research and development, administrative cost and staff cost of health authorities. The Government does not impose any specific tax for these purposes; funds come from **general tax revenue**.

6.3 Private health care financing is used to finance part of the medical cost (in the form of co-payments) and medical services not covered by health insurance programmes.

6.4 The BNHI reimburses health care providers by making payment to claims for services rendered by contracted health and medical care institutions. It collects premiums from the Government and the private sector (both the insured and employers) to pay for such services. The BNHI finances health care services indirectly. Premiums collected by the BNHI from the Government and the private sector (both the insured and employers) are not included in Government health care expenditure and private health care spending to avoid double counting. It is worth noting that the **Government contributes to the BNHI as a third party contributor**.

[1] Some examples of health care services not covered by the NHI Programme include non-medically required cosmetic surgery, in vitro fertilization, trans-sexual surgery, over-the-counter medication, eye-glasses, walking canes, and wheel chairs.

Figure 2 - Financing of Health Care Services



PART 4 - THE NATIONAL HEALTH INSURANCE PROGRAMME

7. The National Health Insurance (NHI) Programme

Objectives of the NHI Programme

7.1 The objectives of the NHI Programme are :

1. to provide universal coverage of the population and equal-opportunity health and medical care;

2. to reduce personal financial burden and to maintain balanced finances and long-term operational viability; and

3. to provide better quality medical care and better health for the population in Taiwan.

Major Components of the NHI Programme

7.2 The major components of the NHI Programme include :

- the insured;
- the benefits;
- the contracted health and medical care institutions;
- the Reserve Fund;
- the co-payment scheme; and
- the premium.

The Insured

Eligibility

7.3 In line with the universal coverage objective of the Programme, every person who has been registered as a resident of Taiwan for four months or more is eligible to, and must, enrol in the Programme. If he does not register, he is liable to a penalty ranging from NT$3,000 to NT$15,000. Employers who do not register their employees and those who do not register their dependants are also liable to a penalty of four times the required contribution. New-born babies are exempted from the four-month residency condition. Foreign employees also have to be insured.

7.4 Health Insurance Cards are issued to the insured; those below four years of age are given Child Health Booklets. When visiting health and medical care institutions, the insured must present the Cards or Booklets to indicate that they are covered by the Programme.

7.5 The NHI Programme covers the insured and their dependants, which comprise spouse, parents, children, grandparents and grandchildren. People who are entitled to be insured cannot be covered as dependants. Dependants must enrol in the Programme along with the insured. As the NHI Programme is employment-related, those who are unemployed do not have to contribute during the period of unemployment, and remain eligible to receive the benefits of the NHI Programme up to six months provided they have contributed to the BNHI for at least two years. In such cases, the BNHI pays for health care services rendered by contracted institutions.

Exemptions

7.6 Military servicemen and prisoners are not covered by the NHI Programme because their health care is provided by the Ministry of National Defence and the Ministry of Justice respectively. Foreign employers as the insured (not in their capacity as employers) are also exempted from the Programme.

Insured Categories

7.7 The insured are classified into 6 categories, which are further divided into 13 items. Enrolment into the NHI Programme is processed through two channels, occupation-based enrolment for Categories 1 to 4 and community-based enrolment for Categories 5 and 6. Those eligible to enrol by occupational groups cannot enrol by community groups. Enrolment has been 90% occupation-based and 10% community-based.

Table 8 - The Insured Categories of the NHI Programme

Category	Beneficiaries	Basis of enrolment
Category 1		
Item 1	Civil servants or full-time personnel in public or private schools	occupation
Item 2	Employees of public or private enterprises	occupation
Item 3	Employees employed by specific employers	occupation
Item 4	Employers or self-employed persons	occupation
Item 5	Independently practising professionals and technicians	occupation
Category 2		
Item 6	Members of an occupational union who have no specific employers or who are self-employed	occupation
Item 7	Seamen	occupation
Category 3		
Item 8	Members of the Farmers' Association and Irrigation Association who have no specific employers or are self-employed and aged above 15 years	occupation
Item 9	Members of the Fishermen's Association who have no specific employers or are self-employed and aged above 15 years	occupation
Category 4		
Item 10	Dependants of military servicemen	occupation
Category 5		
Item 11	Low-income families	community
Category 6		
Item 12	Veterans and survivors of veterans	community
Item 13	Others	community

7.8 The largest group as at end-1996 was Item 2 "employees of public and private enterprises", amounting to 8.7 million participants, or 43% of total enrolment (Table 9). The second largest group was Item 6 "members of an occupational union who have no specific employers or who are self-employed", amounting to 4 million participants, or 20% of total enrolment. The third largest group was Item 8 "members of the Farmers' Association and Irrigation Association who have no specific employers or are self-employed aged above 15 years", amounting to 2.8 million participants, or 14% of total enrolment. Together these three groups made up 77% of total enrolment (15.4 million participants). It can be noted that participants in these three groups were possibly members of the previous largest unions which had centrally managed health insurance programmes (viz. paragraph 5.2).

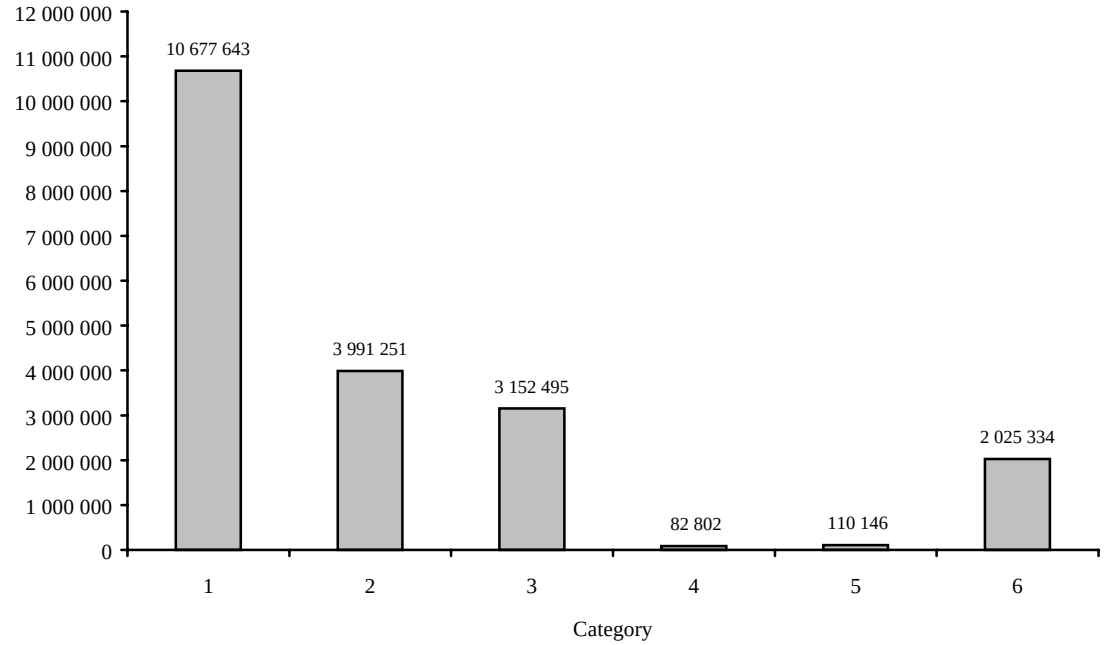
Table 9 - Number of Participants in the NHI Programme (as at end of period)

Category	Item	1995		1996	
1	1	1 200 289	(6.3%)	1 216 449	(6.1%)
	2	8 507 771	(44.5%)	8 677 573	(43.3%)
	3	428 809	(2.2%)	437 890	(2.2%)
	4	300 470	(1.6%)	345 731	(1.7%)
	5	0	(0.0%)	0	(0.0%)
	Sub-total	10 437 339	(54.6%)	10 677 643	(53.3%)
2	6	4 029 494	(21.1%)	3 991 092	(19.9%)
	7	222	(0.0%)	159	(0.0%)
	Sub-total	4 029 716	(21.1%)	3 991 251	(19.9%)
3	8	2 652 042	(13.9%)	2 769 634	(13.8%)
	9	346 397	(1.8%)	382 861	(1.9%)
	Sub-total	2 998 439	(15.7%)	3 152 495	(15.7%)
4	10	69 059	(0.4%)	82 802	(0.4%)
5	11	111 452	(0.6%)	110 146	(0.5%)
6	12	593 614	(3.1%)	634 319	(3.2%)
	13	883 659	(4.6%)	1 391 015	(6.9%)
	Sub-total	1 477 273	(7.7%)	2 025 334	(10.1%)
Total participants		19 123 278	(100.0%)	20 039 671	(100.0%)

Remark : Figures in parentheses are column shares. Participants comprise the insured and their dependants.

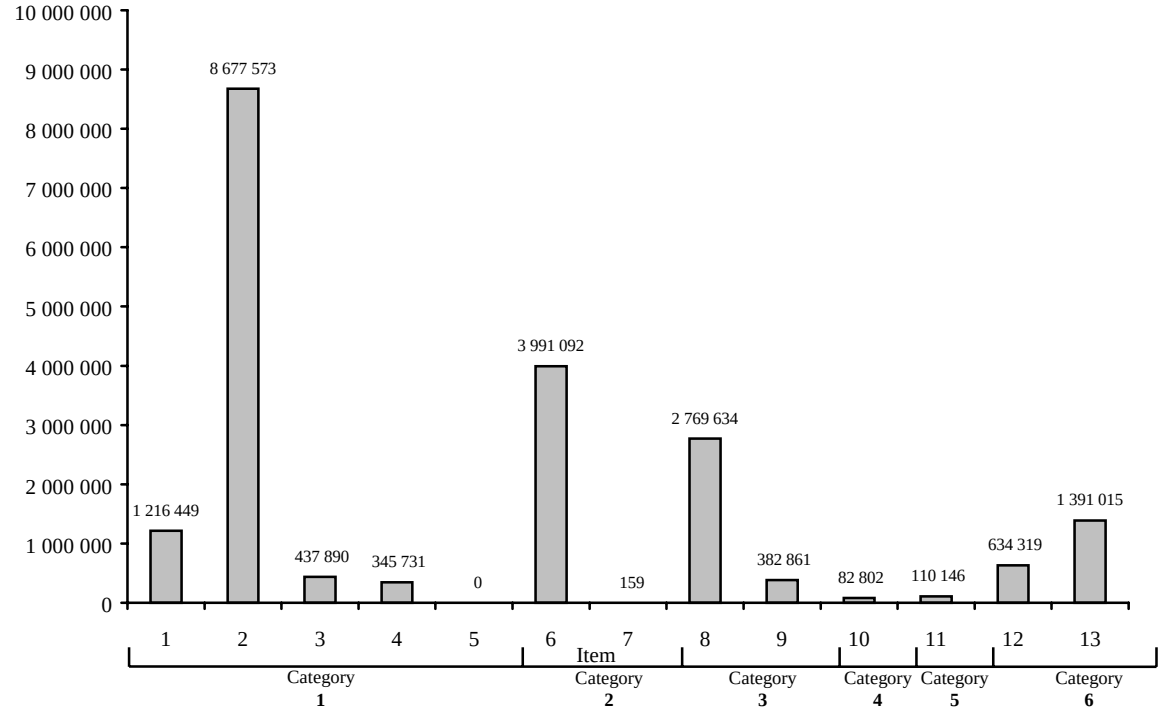
Source : CEPD, Taiwan Statistical Data Book 1997

Figure 3 - Number of Participants in the NHI Programme by Category (as at end-1996)



Source : CEPD, Taiwan Statistical Data Book 1997

Figure 4 - Number of Participants in the NHI Programme by Item (as at end-1996)



Source : CEPD, Taiwan Statistical Data Book 1997

7.9 It is also worth noting that for 1995 and 1996, there was nil enrolment in Item 5 "independently practising professionals and technicians", and the lowest occupation-based enrolment was in Item 4 "employers or self-employed persons", amounting to 0.3 million participants, or only 1.7% of total enrolment. This is possibly because the Government did not act as a third party contributor for these two items. (For details of Government contribution, please refer to paragraph 7.29 and Table 14).

The Benefits

7.10 The NHI Programme provides beneficiaries (the insured and their dependants) with health and medical care services at contracted health and medical care institutions, both government-run and privately-run, in the event of illness, injury, or child-bearing. These services, as detailed in Table 3, include in-patient, out-patient, emergency care, dental care, Chinese medicine care, pharmaceutical care, home health care, psychiatric care, laboratory and x-ray services, physical therapy, haemodialysis, child delivery and some other preventive medical services.

7.11 The coverage of health and medical care services of the NHI Programme is wider than those of the previous insurance programmes. Table 10 gives a comparison on the coverage of health and medical care services.

Table 10 - Coverage of the NHI Programme - Health and Medical Care Services

	The NHI Programme	Labour Insurance Programme	Government Employees Insurance and Farmers Insurance Programmes
In-patient	✓	✓	✓
Out-patient care	✓	✓	✓
Emergency care	✓	✓	✓
Dental care	✓	✓	✓
Chinese medicine care	✓		
Pharmaceutical care	✓		
Home health care	✓	✓	
Psychiatric care	✓		
Corrective surgery for congenital mal-formation	✓	✓	
Peritoneoscopic examination	✓	✓	
Cholecystectomy	✓	✓	
γ-knife	✓	✓	
Physio therapy	✓		
MRI	✓	✓	
Child delivery	✓	✓	
Pap smear	✓	✓	
Physical examination	✓	✓	
Pre- and post-natal examination	✓	✓	
Baby examination	✓		

Sources : BNHI, Internet Homepage - http://www.nhi.gov.tw/
DOH, Internet Homepage - http://www.doh.gov.tw/

Contracted Health and Medical Care Institutions

7.12 As at end-1996, 91.3% of all health and medical care institutions in Taiwan were contracted with the BNHI. These contracted institutions submit claim documents to the BNHI for each month's medical expenses. In cases involving emergency treatment at a non-contracted medical institution in Taiwan or at a legally established medical institution overseas, patients may subsequently apply to the BNHI for reimbursement of medical expenses paid.

7.13 The remaining 8.7% of health and medical care institutions were privately-run, which primarily provide health and medical care services not covered by the NHI Programme such as non-medically required cosmetic surgery, in vitro fertilization, and trans-sexual surgery. These institutions are financed by direct payment by patients.

The Reserve Fund

7.14 To ensure balanced financing of the BNHI and to insulate it from short-term financial fluctuations that could cause inability to make medical payments, the NHI Act provides that a Reserve Fund should be set aside, to be funded by (a) the surplus from each fiscal year; (b) surcharges from late premium payments; and (c) profits generated from the use of the Reserve Fund.

7.15 Under Article 66 of the NHI Act, the Reserve Fund may be used in the following ways :

(a) investment in treasury bonds, treasury bills, and corporate bonds;

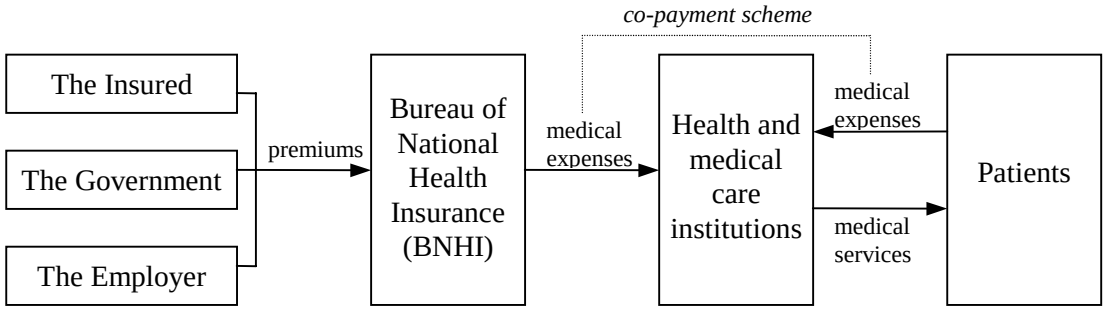
(b) offered as loans to contracted hospitals for renovation or expansion of their facilities; and

(c) investment in any other programme beneficial to the NHI programme as approved by the DOH.

The Co-payment Scheme

7.16 To encourage conscientious use of medical services, a co-payment scheme is introduced, under which the patients (i.e. the beneficiaries) are required to share the medical expenses with the BNHI (Figure 5).

Figure 5 - The NHI Programme



The Fee Schedule

7.17 All health and medical care institutions in Taiwan charge services according to a fee schedule set by the DOH. The objectives of the fee schedule are to set payment criteria that would reflect the cost of medical resources and to reduce mis-reporting. The fee schedule is divided into two categories: "Western medicine and dentistry" and "Chinese medicine". As at end-1996, there were 3 290 service items listed in the fee schedule.

Co-payment by Beneficiaries of Out-patient Costs

7.18 Under the co-payment scheme, patients have to pay NT$50 for dental treatment and traditional Chinese medicine (Table 11). Out-patients pay NT$50 to clinics and district hospitals, NT$100 to regional hospitals and NT$150 to medical centres. For emergency care, patients are required to pay NT$150 to NT$420 depending on the type of the institution the patients visit. In terms of cost recovery, such co-payments represent about 5% to 13% of the cost incurred, depending on the type of the institution.

Table 11 - Co-payment Amount by Beneficiaries for NHI Out-patient Services (NT$)

	Out-patient care	Dental care	Chinese medicine	Emergency care
Clinic (% of actual expenses)	50 (12.74%)	50 (5.07%)	50 (10.60%)	150 (12.74%)
District hospital (% of actual expenses)	50 (6.05%)	50 (6.05%)	50 (6.05%)	150 (6.05%)
Regional hospital (% of actual expenses)	100 (7.35%)	50 (7.35%)	50 (7.35%)	210 (7.35%)
Medical centre (% of actual expenses)	150 (5.95%)	50 (5.95%)	50 (5.95%)	420 (5.95%)

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

Co-payment by Beneficiaries of In-patient Costs

7.19 Co-payment rates for in-patient treatment vary according to the ward (acute or chronic) and the duration of the stay (Table 12). This arrangement aims to cut down medical expenses by encouraging patients to move to the chronic ward or go home to recuperate once their condition has stabilized. In terms of cost recovery, such co-payments represent 5.91% of the cost incurred.

7.20 To ease the financial burden of the patients, ceilings are placed on co-payment for hospitalization. For patients who stay in hospitals for less than 30 days in the acute ward and/or 180 days in the chronic ward, the ceiling on co-payment is NT$17,000 per stay and NT$29,000 cumulative for the entire calendar year (Table 13).

Table 12 - Rate of Co-payment by Beneficiaries for Hospitalization

Ward	Length of stay	Rate of co-payment	% of actual cost
Acute	1st - 30th days	10%	5.91%
	31st - 60th days	20%	5.91%
	61st day and up	30%	5.91%
Chronic	1st - 30th days	5%	5.91%
	31st - 60th days	10%	5.91%
	61st day - 180th days	20%	5.91%
	181st day and up	30%	5.91%

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

Table 13 - Maximum Amount of Co-payment by Beneficiaries for Hospitalization

Ward	Maximum Amount of Co-payment by Beneficiaries for Hospitalization	
Acute	≤30 days: NT$17,000 per stay	cumulative for the entire calendar year: NT$29,000
Chronic	≤180 days: NT$17,000 per stay	cumulative for the entire calendar year: NT$29,000

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

Exemptions From Co-payment by Beneficiaries

7.21 Exemption from co-payment is granted in cases involving child delivery, preventive health services, follow-up treatment as part of a single course of treatment, and to low-income households, veterans and their dependants, and people residing in mountainous areas or on offshore islands. Exemption is also granted to holders of Major Illness/Injury Certificates issued by the BNHI. Examples of major illnesses are heart disease and diabetes mellitus. In such cases, the Government pays for these exemptions.

The Premium

7.22 The NHI Programme is financed by premiums contributed by the insured, employers and the Government. Premiums paid by the insured and employers are tax deductible. The employer is required to deduct the employee's contribution from the salary every month and submit the amount together with the employer's contribution to the BNHI. A two-track system is adopted in assessing the premiums :

- the premiums paid by the insured are calculated on a **per-dependant basis** (i.e. premiums paid by the insured vary with the **number of dependants**, which is in line with the principle of payment by beneficiaries) while

- the premiums paid by employers and the Government are calculated on a **per-insured basis** (i.e. premiums paid by employers and the Government vary with the **number of employees**, not the number of dependants of the employees so as to prevent employers from selecting employees with multiple dependants for unfavourable treatment).

Premiums Paid by the Insured

7.23 Premiums paid by the insured are calculated by the following formula :

Premiums = Premium rate **x** Graded salary **x** Contribution share **x** (the insured + number of dependants up to five) .

Premiums Paid by Employers

7.24 Premiums paid by employers are calculated by the following formula :

Premiums = Premium rate **x** Graded salary **x** Contribution share **x** (the employee + average number of dependants) .

Premiums Paid by the Government

7.25 Premiums paid by the Government as a third party contributor are calculated by the following formula :

Premiums = Premium rate **x** Graded salary **x** Contribution share **x** (the employee + average number of dependants) .

7.26 According to these formulae, the amount of premium is based on :

- the premium rate;
- the graded salary;
- the contribution share; and
- the number of beneficiaries, comprising the insured and their dependants.

The Premium Rate

7.27 The premium rate has been set at 4.25% since the implementation of the NHI Programme on 1 March 1995; it can be raised to the maximum limit of 6%. The rate is determined by the Government, the decision of which is determined by the financial position of the BNHI. As the BNHI has been running surpluses, the premium rate remains at 4.25%.

The Graded Salary

7.28 Salaries are scaled into 28 grades, which range from NT$15,360 to NT$53,000, depending on the employee's actual monthly salary (Please refer to Appendix VI for details).

The Contribution Share

7.29 The respective portions of the premium borne by the insured, employers, and the Government vary according to the category of the insured (Table 14). It is worth noting that the Government contributes as a third party contributor to all except employers, self-employed, independently practising professionals/technicians (Items 4-5). It is also worth noting that low income households (Item 11) and veterans (Item 12) do not need to contribute.

Table 14 - Contribution Shares of the NHI Premium (%)

Category	Item	The insured		Insured	Employer	Government
1	1	Civil servants and teachers/administrators in public schools	The insured and their dependants	40	60	0
	1	Teachers/administrators in private schools	The insured and their dependants	40	30	30
	2, 3	Employees of public or private enterprises and other employees with specific employers	The insured and their dependants	30	60	10
	4, 5	Employers, self-employed, independently practising professionals/technicians	The insured and their dependants	100	0	0
2	6, 7	Occupational union members without specific employers, seamen serving on foreign vessels	The insured and their dependants	60	0	40
3	8, 9	Members of the Farmers' Association, the Fishermen's Association, or the Irrigation Association	The insured and their dependants	30	0	70
4	10	Household representatives of military dependants	The insured and their dependants	40	0	60
5	11	Low-income households	The insured and their dependants	0	0	100
6	12	Household representatives of survivors of veterans	The insured	0	0	100
			Their dependants	30	0	70
	13	Others	The insured and their dependants	60	0	40

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

8. The NHI Administrative Framework

The Department of Health (DOH)

8.1 The NHI Task Force of the DOH is the authority in charge of the NHI Programme and is responsible for formulating NHI policy and handling supervision, guidance and assessment matters. The NHI Task Force currently consists of one chairman, one deputy chairman, and four division directors. All are appointed by the DOH Director-General and drawn from the ranks of DOH personnel or outside specialists. Three relevant committees operate under its leadership (Appendix VII) :

- the NHI Supervisory Committee;
- the NHI Dispute Mediation Committee; and
- the NHI Health Care Cost Arbitration Committee.

The NHI Supervisory Committee

8.2 The functions of the Committee are :

- to propose insurance policy;
- to review insurance operations and accounting matters;
- to audit insurance finances; and
- to make recommendations on legal and academic matters.

8.3 There are 29 members on this Committee, with the DOH Deputy Director-General serves concurrently as the Committee's chairman. Other members include five specialists in medicine and insurance, five representatives of the insured, five representatives of the employers, five representatives of the contracted medical care institutions, and eight representatives of the Government. All members are appointed by the DOH.

The NHI Dispute Mediation Committee

8.4 The NHI Dispute Mediation Committee's function is to settle disputes among the insured and the contracted medical care institutions. There are 15 members in this Committee, chaired by a senior specialist in medicine appointed by the DOH. Other members include two specialists in insurance, four specialists in law, six specialists in medicine, and two representatives of the DOH.

The NHI Health Care Cost Arbitration Committee

8.5 The function of the NHI Health Care Cost Arbitration Committee is to determine and review medical payments. The Committee, chaired by an actuary appointed by the DOH, consists of nine representatives of premium payers, nine specialists and scholars, and nine from various relevant government authorities, totalling 27 members.

The Bureau of National Health Insurance (BNHI)

Establishment of the BNHI

8.6 The BNHI is a government agency and is responsible for running the NHI Programme. The BNHI was set up by the DOH under Article 6 of the NHI Act. The BNHI has five departments, five offices and two committees (Appendix VII). The BNHI collects premiums every month from the employer, who is required to submit the amount together with the employee's contribution deducted from the employee's salary.

8.7 The BNHI has a headquarters in Taipei and 12 branches in the 17 medical care regions. As at end-1996, the BNHI had a staff of 1 762 (Table 15). The headquarters is responsible for planning, supervision, research and development, training, information management, and auditing whereas the branches handle underwriting work, collection of premiums, and review and approval of medical expenses of the contracted health and medical care institutions.

Table 15 - Establishment of the BNHI (as at end-1996)

	Number of staff
The BNHI headquarters	340
12 BNHI branches	1 422
TOTAL	1 762

Source : BNHI, Internet Homepage - http://www.nhi.gov.tw/

Administrative and Staff Costs of the BNHI

8.8 Table 16 shows the medical expenditure of the BNHI and administrative and staff costs. Medical expenditure refers to the payment for claims on health and medical care services by contracted health and medical care institutions. It amounted to NT$369,574 million between March 1995 and December 1996. This was 96.3% of total expenditure of the BNHI. Administrative and staff costs accounted for 3.7% of the total.

Table 16 - Total Expenditure of the BNHI (NT$ million)

	Amount	Share
Administrative and staff costs	14,200	3.7%
Medical expenditure (i.e. payment for claims on health and medical care services)	369,574	96.3%
Total expenditure of the BNHI	**383,774**	**100.0%**

Remark : The figures are for the period between March 1995 and December 1996.
Sources : BNHI, Internet Homepage - http://www.nhi.gov.tw/
DOH, Internet Homepage - http://www.doh.gov.tw/

PART 5 - ANALYSIS OF HEALTH CARE EXPENDITURE AND ITS FINANCING

9. Total Health Care Expenditure and Financing

Total Health Care Expenditure

9.1 Total health care expenditure refers to the sum of (a) Government expenditure on the delivery of health care services not related to the National Health Insurance Programme, including certain over-the-counter medication, health care education, research and development; (b) private sector spending on those services not covered by the National Health Insurance Programme, such as in vitro fertilization and certain cosmetic surgeries, and the spending by private hospitals on the construction of medical facilities; and (c) the cost of delivery of all health care services covered by the National Health Insurance Programme (detailed in Table 10) plus the cost of insurance administration.

9.2 Total health care expenditure has grown faster than GDP and the inflation rate. This is partly the result of economic development and therefore greater attention paid to health care. It totalled NT$409,828 million (HK$112,293 million) in 1996, 85.3% more than the amount spent in 1991. As a share of gross domestic product (GDP), total health care expenditure was 5.4% in 1996, compared to 4.6% in 1991. Table 17 shows the details of total health care expenditure in Taiwan between 1991 and 1996.

Analysis

9.3 Table 17 and Figure 6 compare the growth rate of total health care expenditure with that of GDP and the inflation rate. It can be seen that total health care expenditure has been growing faster than GDP and the inflation rate. This is in line with the increase in health and medical care facilities and personnel. However, since the implementation of the NHI Programme in 1995, the growth of total health care expenditure has slowed down. This was mainly the result of the introduction of the co-payment scheme in the NHI Programme, which has discouraged mis-use of medical services.

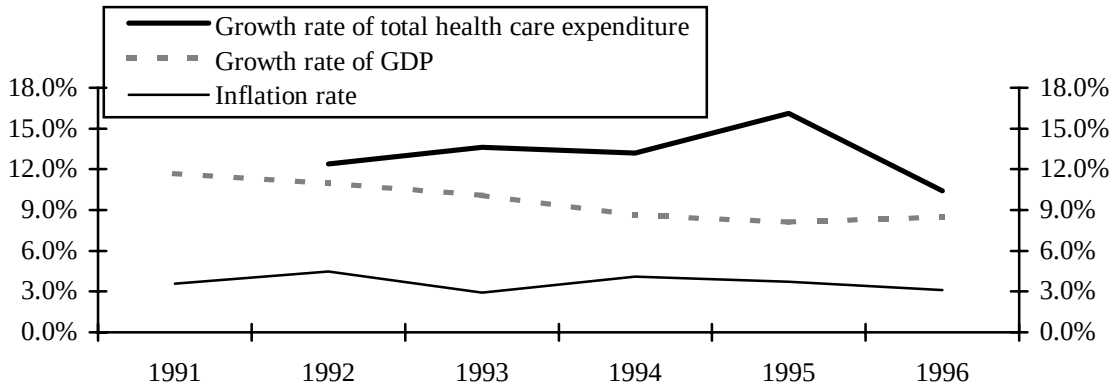
9.4 Similarly, per capita health care expenditure has been growing faster than per capita GDP and the inflation rate. Per capita health care expenditure in 1996 was NT$19,114, which was 76.7% above the figure in 1991. The rate of increase was higher than the growth in per capita GDP, which was 46.0% over the same period. This means that on average Taiwan citizens spend more on health care.

Table 17 - Total Health Care Expenditure

	1991	1992	1993	1994	1995	1996
Total health care expenditure (NT$ million)	221,214	248,598	282,420	319,733	371,220	409,828
GDP (NT$ million)	4,810,705	5,337,693	5,874,513	6,376,498	6,892,046	7,497,677
Health care expenditure as a share of GDP	*4.6%*	*4.7%*	*4.8%*	*5.0%*	*5.4%*	*5.4%*
Population ('000)	20 454.9	20 654.7	20 848.3	21 086.6	21 267.7	21 441.4
Per capita health care expenditure (NT$)	10,815	12,036	13,546	15,163	17,455	19,114
Per capita GDP (NT$)	234,018	257,213	280,487	301,832	323,509	349,200
Growth rate	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Total health care expenditure	-----	12.4%	13.6%	13.2%	16.1%	10.4%
GDP	11.7%	11.0%	10.1%	8.6%	8.1%	8.8%
Population	1.2%	1.1%	1.0%	1.2%	0.9%	1.1%
Per capita health care expenditure	-----	11.3%	12.5%	11.9%	15.1%	9.5%
Per capita GDP	10.6%	9.9%	9.0%	7.6%	7.2%	7.9%
Inflation rate	3.6%	4.5%	2.9%	4.1%	3.7%	3.1%

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Figure 6 - Growth Rates of Total Health Care Expenditure and GDP and the Inflation Rate



Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Total Health Care Financing

9.5 Health care services in Taiwan are financed:

- directly by the Government from general tax revenue;
- directly by the private sector (i.e. individuals and employers) through direct payments and co-payments; and
- indirectly from insurance premiums.

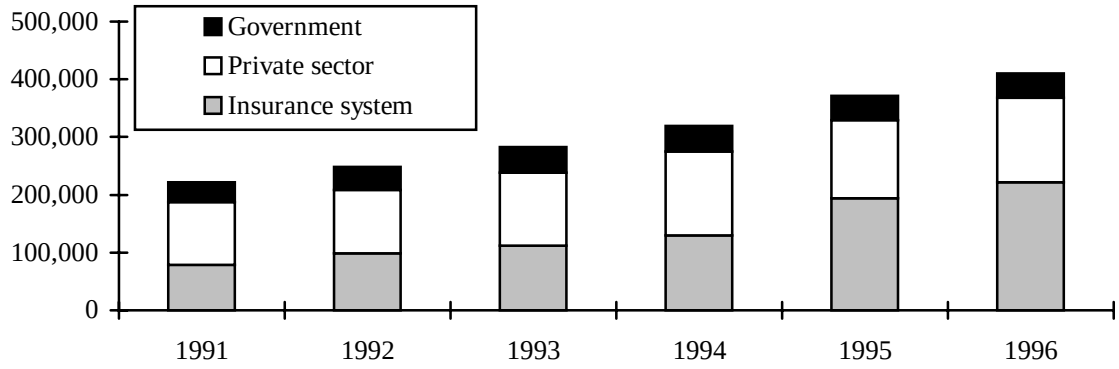
Tables 18 and 19 and Figures 7, 8 and 9 show the pattern of health care financing from 1991 to 1996.

Table 18 - Total Health Care Financing (NT$ million)

	1991	**1992**	**1993**	**1994**	**1995**	**1996**
Total health care financing	221,214	248,598	282,420	319,733	371,220	409,828
Government (general tax revenue)	34,392	40,288	43,784	44,293	42,435	42,129
Share	*15.6%*	*16.2%*	*15.5%*	*13.9%*	*11.4%*	*10.3%*
Private sector (direct payments and co-payments)	107,569	109,887	127,129	145,856	134,330	146,506
Share	*48.6%*	*44.2%*	*45.0%*	*45.6%*	*36.2%*	*35.7%*
Insurance system (premiums from the insured, employers and the Government)	79,253	98,422	111,507	129,584	194,455	221,193
Share	*35.8%*	*39.6%*	*39.5%*	*40.5%*	*52.4%*	*54.0%*
Growth rate	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Total health care financing	-----	12.4%	13.6%	13.2%	16.1%	10.4%
Government	-----	17.1%	8.7%	1.2%	-4.2%	-0.7%
Private sector	-----	2.2%	15.7%	14.7%	-7.9%	9.1%
Insurance system	-----	24.9%	13.3%	16.2%	50.1%	13.8%
GDP	11.7%	11.0%	10.1%	8.6%	8.1%	8.8%

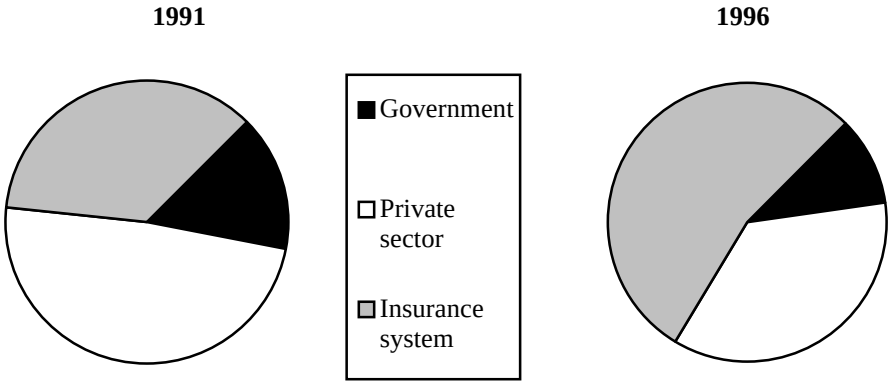
Source : DOH, Health and Vital Statistics 1996

Figure 7 - Total Health Care Financing (NT$ million)



Source : DOH, Health and Vital Statistics 1996

Figure 8 - Total Health Care Financing in 1991 and 1996



Source : DOH, Health and Vital Statistics 1996

9.6 Premiums paid to the insurance system have become the most important source of financing of health care services since 1995 when the NHI Programme was launched. The amount rose throughout the period. In 1996, it amounted to NT$221,193 million, or 54.0% of total health care financing (Table 18). The sharp increase was primarily due to the universal coverage of the NHI Programme in contrast to the coverage of 60% of the population prior to its implementation.

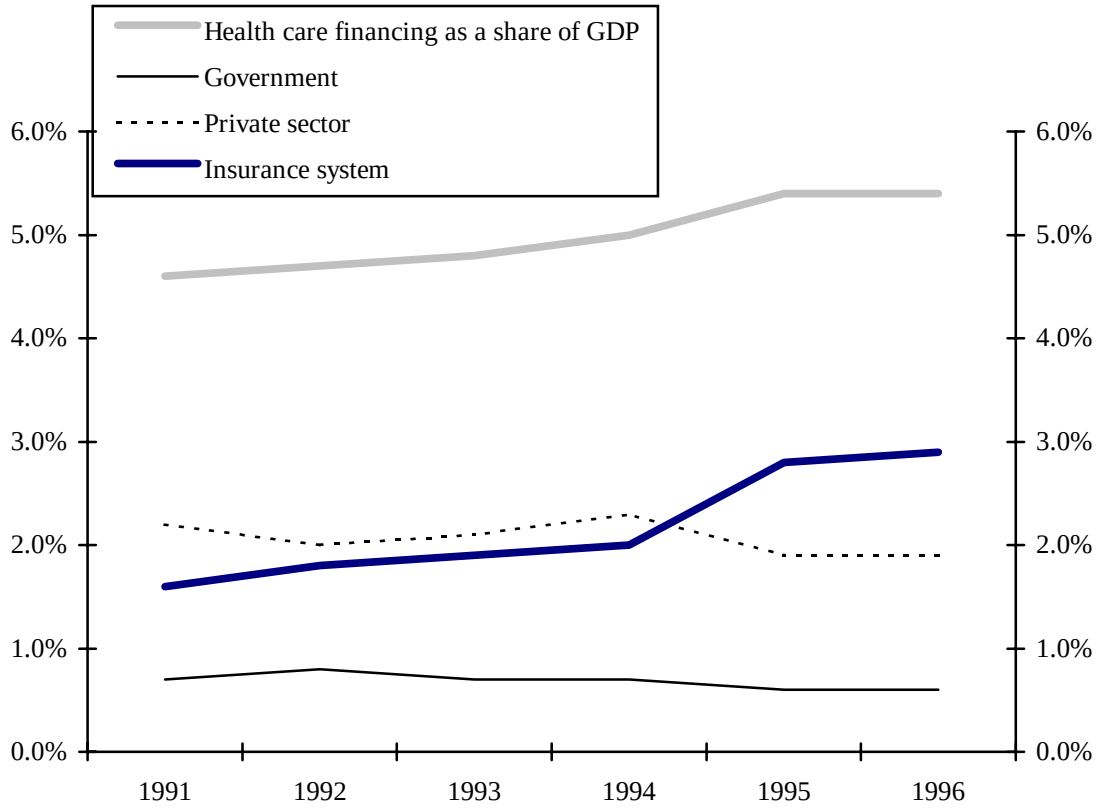
9.7 The NHI Programme also helps to reduce financing from the Government and the private sector as it covers a wider population and a wider range of medical services. Certain services no longer require financing from the Government or the private sector. In 1995 and 1996, government financing dropped below the level of 1994. In the same period, private sector financing decreased from a share of 45% of total health care financing to 35%. At the same time, insurance financing (through NHI) rose from a share of 45% of total health care financing to 54%.

Table 19 - Financing of Health Care Services as Percentages of GDP

	1991	1992	1993	1994	1995	1996
Total health care financing as a share of GDP	4.6%	4.7%	4.8%	5.0%	5.4%	5.4%
Government	0.7%	0.8%	0.7%	0.7%	0.6%	0.6%
Private sector	2.2%	2.0%	2.1%	2.3%	1.9%	1.9%
Insurance system	1.6%	1.8%	1.9%	2.0%	2.8%	2.9%

Source : DOH, Health and Vital Statistics 1996

Figure 9 - Financing of Health Care Services as Percentages of GDP



Source : DOH, Health and Vital Statistics 1996

9.8 The growth rate of total health care financing in Taiwan peaked at 16% in 1995 when the NHI Programme was introduced. After the introduction of NHI Programme, total health care financing dropped to a lower growth rate of 10.4% in 1996, although it remained higher than the GDP growth rate of 8.8% in 1996 and climbed to a new high of 5.4% as a share of GDP. Both the Government and the private sector dropped its growth of health care financing; however, the health care insurance system experienced a continued upward trend in growth, which has contributed to the new high as a share in GDP in 1996. This may or may not be a warning signal of financial burden, as the health care insurance system has only been in place for a short period of two years in the period under study.

10. Government Health Care Expenditure and Financing

Government Health Care Expenditure

10.1 Government health care expenditure comprises :

- the spending on hospitals and clinics;
- the spending on administrative costs; and
- the spending on research and development.

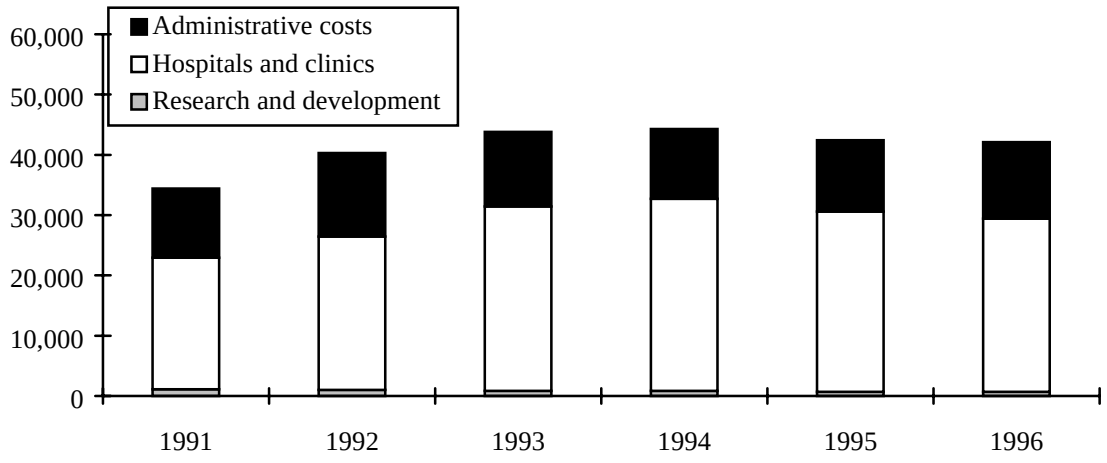
10.2 Government spending on hospitals and clinics refers to the cost of delivering those medical services not covered by health insurance programmes such as over-the-counter medication, eye-glasses, walking canes, wheel chairs, health care education, and promotion of public health care. Government spending on administrative costs comprises administrative cost and staff cost. Table 20 and Figures 10 and 11 show the details of Government health care expenditure.

Table 20 - Government Health Care Expenditure (NT$ million)

	1991	1992	1993	1994	1995	1996
Government health care expenditure	34,392	40,288	43,784	44,293	42,435	42,129
Administrative costs	11,476	13,845	12,363	11,569	11,840	12,716
Share	*33.4%*	*34.4%*	*28.2%*	*26.1%*	*27.9%*	*30.2%*
Hospitals and clinics	21,834	25,446	30,547	31,855	29,883	28,738
Share	*63.5%*	*63.2%*	*69.8%*	*71.9%*	*70.4%*	*68.2%*
Research and development	1,112	997	875	869	712	674
Share	*3.2%*	*2.5%*	*2.0%*	*2.0%*	*1.7%*	*1.6%*
Growth rate	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Government health care expenditure	-----	17.1%	8.7%	1.2%	-4.2%	-0.7%
Administrative costs	-----	20.6%	-10.7%	-6.4%	2.3%	7.4%
Hospitals and clinics	-----	16.5%	20.0%	4.3%	-6.2%	-3.8%
Research and development	-----	-10.3%	-12.2%	-0.7%	-18.1%	-5.3%

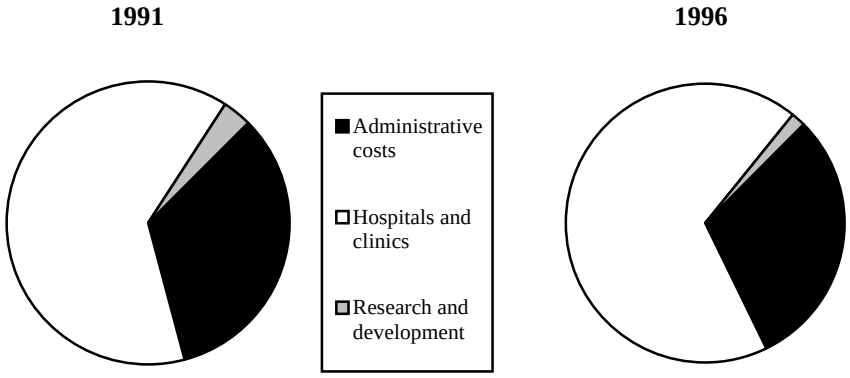
Source : DOH, Health and Vital Statistics 1996

Figure 10 - Government Health Care Expenditure (NT$ million)



Source : DOH, Health and Vital Statistics 1996

Figure 11 - Government Health Care Expenditure in 1991 and 1996



Source : DOH, Health and Vital Statistics 1996

10.3 As the coverage of the NHI Programme in terms of population and medical services increased, Government spending on hospitals and clinics fell. Therefore, in 1995, when the Programme was implemented, Government spending on hospitals and clinics decreased by 6.2%. In 1996, it fell further by 3.8%. As the spending on hospitals and clinics is the largest component in Government health care expenditure, the fall in the former contributed to the fall in the latter.

10.4 Government spending on administrative costs comprises spending on administrative cost and staff cost. The implementation of the NHI Programme did not reduce such spending significantly. Its share in Government health care expenditure was 30.2% in 1996, compared to 26.1% in 1994.

10.5 Government spending on research and development has experienced a general decline from 1991 to 1996, the period under study. It dropped significantly in 1995 and continued to drop in 1996. The amount spent in 1996 was only 61% of that spent in 1991, despite inflation. We have not been able to find out the reason for this trend.

Analysis

10.6 Government health care expenditure had been increasing until 1994. This was in line with the increase in total health care expenditure (Table 17). When the NHI Programme was implemented on 1 March 1995, it covered a wider population and more medical services; hence, the Government did not need to spend as much as before. In 1995, Government health care expenditure fell to NT$42,435 million, and further to NT$42,129 million in 1996 (Table 21). In contrast, total Government expenditure continued to rise over the period. Government health care expenditure as a share of total Government expenditure fell from 2.2% in 1994 to 1.8% in 1996. This means that the Government was able to spend more in other areas.

Table 21 - Government Health Care Expenditure and Total Government Expenditure (NT$ million)

	1991	1992	1993	1994	1995	1996
Government health care expenditure	34,392	40,288	43,784	44,293	42,435	42,129
Growth rate	-----	*17.1%*	*8.7%*	*1.2%*	*-4.2%*	*-0.7%*
Total Government expenditure	1,633,511	1,920,180	1,977,784	2,046,082	2,078,789	2,282,062
Growth rate	-----	*17.5%*	*3.0%*	*3.5%*	*1.6%*	*9.8%*
Government health care expenditure as a share of total Government expenditure	2.1%	2.1%	2.2%	2.2%	2.0%	1.8%

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Government Health Care Financing

10.7 Government health care financing comes from **general tax revenue**. The Government does not impose any specific tax for the financing of health care services.

10.8 As the NHI Programme paid for a wider population and a wider range of medical services, Government health care expenditure fell. Therefore, the Government did not need to spend as much general tax revenue on health care as before. Government health care allocation peaked in 1994, and fell subsequently in 1995 and further in 1996.

10.9 As the population coverage of the NHI Programme increased, the premiums paid by the Government as a third party contributor and as employer would increase accordingly. However, such premiums were not included in the amount of Government health care expenditure. Due to the lack of breakdown of financial data, it is uncertain whether or not and how much the overall burden of the Government increased.

11. Private Health Care Expenditure and Financing

Private Health Care Expenditure

11.1 Private health care expenditure refers to the spending made by medical service providers on delivering those medical services not covered by health insurance programmes, such as in vitro fertilization and certain cosmetic surgeries. It also includes the cost of delivering those medical services covered by health insurance programmes, for which the beneficiaries need to make co-payment. In addition, it includes the spending made by private hospitals on the construction of medical facilities. Lastly, it includes the spending of non-profit making organizations on delivering medical care services.

Analysis

11.2 Private health care expenditure had been increasing until 1994. When the NHI Programme was implemented on 1 March 1995 and covered a larger population and medical services, spending of the private sector fell by 7.9% in 1995. Although it increased in 1996, its share in total private sector expenditure continued to fall. In 1996, private health care expenditure was 3.2% of total private expenditure, compared to 3.9% in 1994 (Table 22).

Table 22 - Private Health Care Expenditure and Total Private Expenditure (NT$ million)

	1991	**1992**	**1993**	**1994**	**1995**	**1996**
Private health care expenditure	107,569	109,887	127,129	145,856	134,330	146,506
Growth rate	-----	*2.2%*	*15.7%*	*14.7%*	*-7.9%*	*9.1%*
Total private expenditure	2,635,459	2,988,804	3,345,885	3,772,529	4,123,356	4,515,194
Growth rate	-----	*13.4%*	*11.9%*	*12.8%*	*9.3%*	*9.5%*
Private health care expenditure as a share of total private expenditure	4.1%	3.7%	3.8%	3.9%	3.3%	3.2%

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Private Health Care Financing

11.3 Private health care financing refers to the direct payment made by households and employers on those medical services not covered by health insurance programmes, such as in vitro fertilization and certain cosmetic surgeries. It also includes co-payment made by households and employers on those medical services covered by health insurance programmes. In addition, it includes the income of private hospitals used in paying for the construction of medical facilities. Lastly, it includes donations to non-profit making organizations for the purpose of delivering medical and health care services.

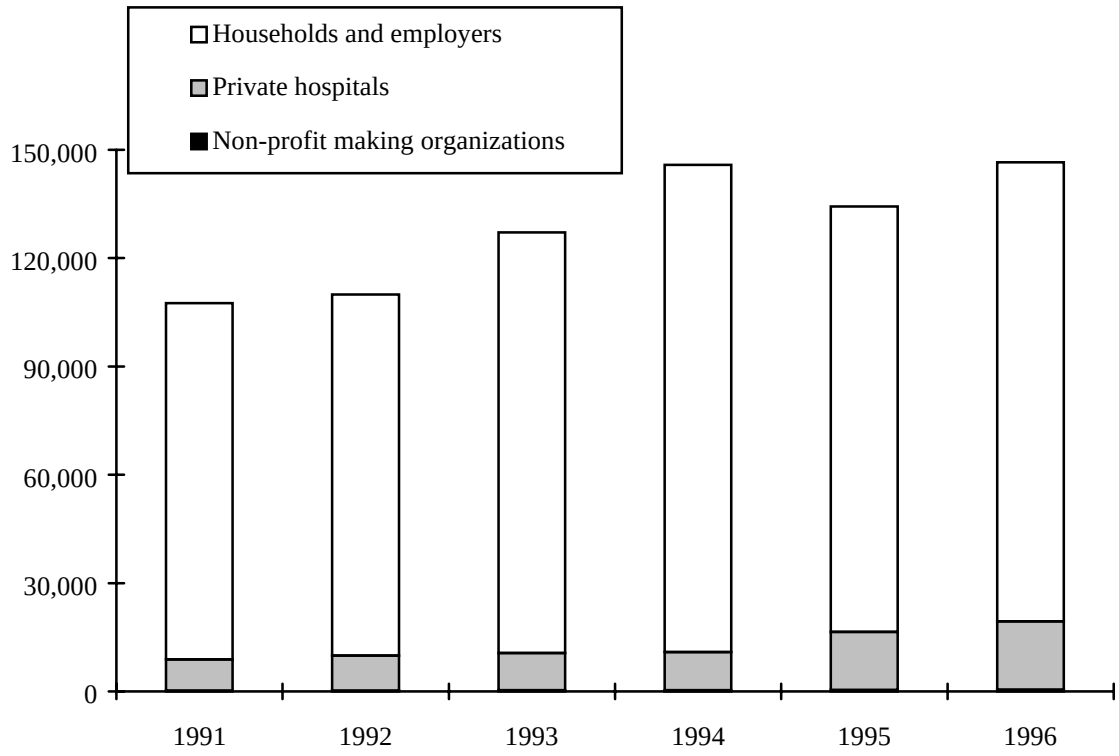
11.4 As the NHI Programme covered more population and medical services, certain services no longer required financing from direct payment made by households and employers after 1 March 1995. As a result, direct payment made by households and employers decreased by 7.9% in 1995. As direct payment made by households and employers is the largest component in private health care financing, the fall in the former contributed to the fall in the latter (Table 23 and Figures 12 and 13).

Table 23 - Private Health Care Financing (NT$ million)

	1991	**1992**	**1993**	**1994**	**1995**	**1996**
Private health care financing	107,569	109,887	127,129	145,856	134,330	146,506
Households and employers	98,691	99,954	116,480	134,913	117,850	127,098
Share	*91.7%*	*91.0%*	*91.6%*	*92.5%*	*87.7%*	*86.8%*
Private hospitals	8,604	9,646	10,328	10,587	16,041	18,913
Share	*8.0%*	*8.8%*	*8.1%*	*7.3%*	*11.9%*	*12.9%*
Non-profit making organizations	274	287	321	356	439	495
Share	*0.3%*	*0.3%*	*0.3%*	*0.2%*	*0.3%*	*0.3%*
Growth rate	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Private health care financing	-----	2.2%	15.7%	14.7%	-7.9%	9.1%
Households and employers	-----	1.3%	16.5%	15.8%	-12.6%	7.8%
Private hospitals	-----	12.1%	7.1%	2.5%	51.5%	17.9%
Non-profit making organizations	-----	4.7%	11.8%	10.9%	23.3%	12.8%

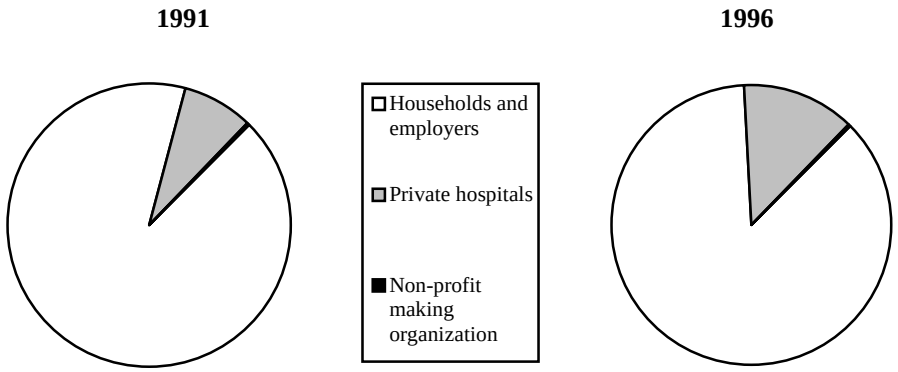
Source : DOH, Health and Vital Statistics 1996

Figure 12- Private Health Care Financing (NT$ million)



Source : DOH, Health and Vital Statistics 1996

Figure 13- Private Health Care Financing in 1991 and 1996



Source : DOH, Health and Vital Statistics 1996

11.5 The income which private hospitals used to pay for the construction of medical facilities increased significantly in 1995. This was the result of the establishment of the Medical Care Development Fund in 1994 which assisted the private sector to establish medical institutions in remote areas (please refer to paragraph 4.8 for details). Its share in private health care financing was 12.9% in 1996, compared to 7.3% in 1994.

11.6 Finally, donations to non-profit making organizations as assistance for them to deliver medical and health care services increased over the period under study. It represented 0.3% of private health care financing in 1996.

11.7 As the population coverage of the NHI Programme increased, the premiums paid by the private sector would increase accordingly. However, such premiums were not included in the amount of private health care financing. Due to the lack of breakdown of financial data, it is uncertain whether or not and how much the overall burden of the private sector has increased.

12. Expenditure and Financing of the Health Care Insurance System

Expenditure of the Health Care Insurance System

12.1 Expenditure of the health care insurance system includes payment on claims made by contracted health and medical care institutions for health care services rendered and the cost of running the insurance programmes.

12.2 Prior to the implementation of the NHI Programme, Taiwan had about 10 insurance programmes. The major ones were the Government Employees Insurance Programme, the Labour Insurance Programme and the Farmers Insurance Programme. The expenditure of the three insurance programmes accounted for 17.7%, 58.8%, and 21.6% respectively (total 98%) of total expenditure by the insurance system in 1994 (Table 24).

Table 24 - Expenditure of the Health Care Insurance System (NT$ million)

	1991	1992	1993	1994	1995	1996
Expenditure by the health care insurance system	79,253	98,422	111,507	129,584	194,455	221,193
NHI Programme	0	0	0	0	162,581	221,193
Share	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*83.7%*	*100.0%*
Government Employees Insurance Programme	12,684	16,022	19,546	22,873	5,150	0
Share	*16.0%*	*16.3%*	*17.5%*	*17.7%*	*2.6%*	*0.0%*
Labour Insurance Programme	48,349	58,551	64,775	76,144	18,074	0
Share	*61.0%*	*59.5%*	*58.1%*	*58.8%*	*9.3%*	*0.0%*
Farmers Insurance Programme	17,203	21,940	24,765	27,926	6,846	0
Share	*21.7%*	*22.3%*	*22.2%*	*21.6%*	*3.5%*	*0.0%*
Other insurance programmes	1,017	1,910	2,420	2,640	1,804	0
Share	*1.3%*	*1.9%*	*2.2%*	*2.0%*	*0.9%*	*0.0%*

Remark : The NHI Programme was officially launched on 1 March 1995. It encompasses all previous insurance programmes. Therefore, the expenditure between March and December in 1995 was the spending of the BNHI, while the expenditure in January and February was that of all other insurance programmes.

Source : DOH, Health and Vital Statistics 1996

Analysis

12.3 As the NHI Programme covers over 90% of the population, its implementation in March 1995 raised significantly (50% growth in 1995) the expenditure by the insurance system on health care (Table 25). Apart from the increase in the coverage of population, there was also an increase in the coverage of health and medical care services. As a result, the increases in expenditure of the insurance system were higher than the inflation rate, implying that there were increases in real terms over the period.

Table 25 - Growth Rate of Expenditure of the Health Care Insurance System and the Inflation Rate

	1991	**1992**	**1993**	**1994**	**1995**	**1996**
Expenditure of the health care insurance system	79,253	98,422	111,507	129,584	194,455	221,193
Growth rate	-----	*24.9%*	*13.3%*	*16.2%*	*50.1%*	*13.8%*
Inflation rate	3.6%	4.5%	2.9%	4.1%	3.7%	3.1%

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Claims on Health and Medical Care Services

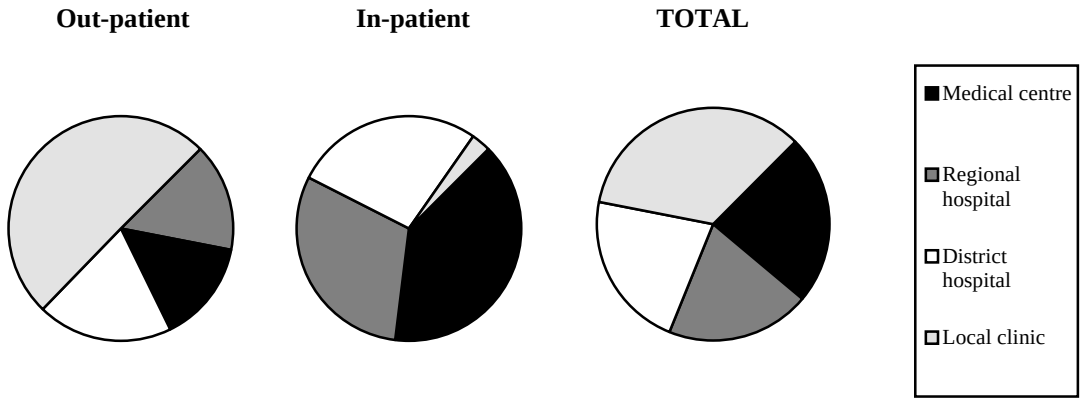
12.4 Claims on health and medical care services in 1996 amounted to NT$212.8 billion. Of this, 66.6% was on out-patient services while the other 33.4% was on in-patient services. Table 26 and Figure 14 show the claims on health and medical care services by type of service and by medical institution.

Table 26 - Claims on Health and Medical Care Services by Type of Service and by Medical Institution (%)

	Out-patient	In-patient	TOTAL
Medical centre	10.3	13.2	23.5
Regional hospital	9.8	10.2	20.0
District hospital	13.0	9.1	22.1
Local clinic	33.5	0.9	34.4
TOTAL	66.6	33.4	100.0

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Figure 14 - Claims on Health and Medical Care Services by Type of Service and by Medical Institution



Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Financing of the Health Care Insurance System

12.5 The health care insurance system is financed from the premiums collected by the BNHI from the insured, employers and the Government. However, the BNHI does not have a detailed breakdown on the premiums collected from each group. It is thus not possible to understand the premium contribution pattern of the BNHI in the past three years.

13. Summary

13.1 In 1996, total health care financing was NT$409,828 million (5.4% of GDP). It is sourced from (Figure 15) :

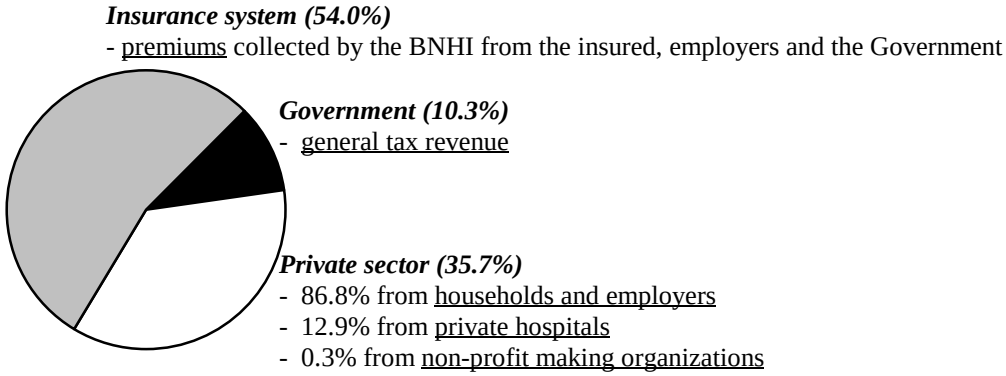
- the Government 10.3%;
- the private sector 35.7%; and
- the insurance system 54.0%.

13.2 The Taiwanese Government finances health care wholly by **general tax revenue**. The Government does not impose any specific tax for the financing of health care services.

13.3 Private health care financing comes mainly from **households and employers** (86.8%). Another source of financing is the **private hospitals** (12.9%) and the rest (0.3%) comes from **non-profit making organizations**.

13.4 Health care financing of the insurance system comes from the **premiums** collected by the BNHI from **the insured, the employers and the Government**.

Figure 15 - Total Health Care Financing in 1996



Source : DOH, Health and Vital Statistics 1996

PART 6 - ANALYSIS OF THE NHI PROGRAMME

Coverage of the Population

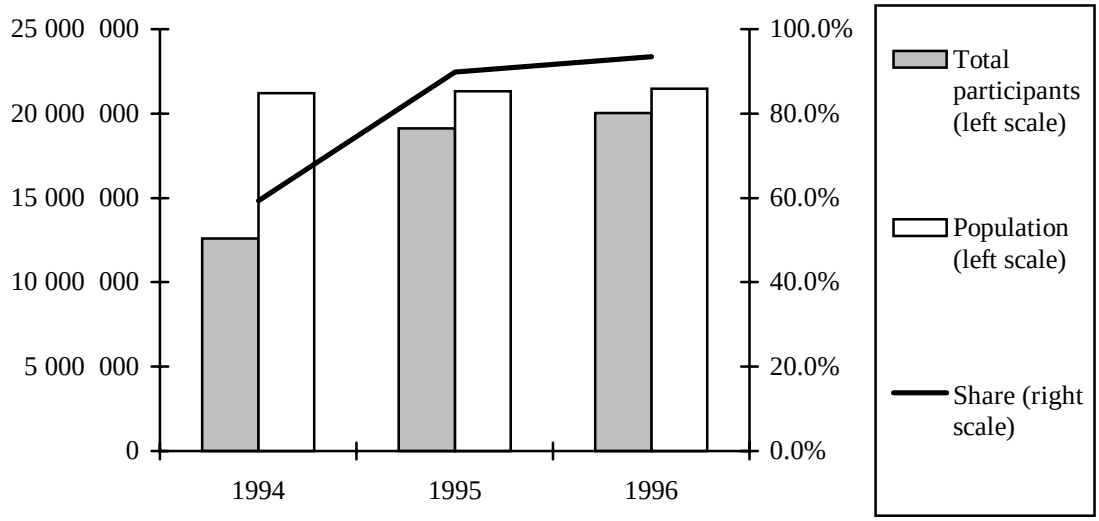
14.1 With the implementation of the NHI Programme on 1 March 1995, the population covered increased significantly: an increase of 5.5 million beneficiaries between 1994 and 1996. As at end-1996, there were 20 039 671 participants in the NHI Programme, accounting for 93.4% of the population. This contrasted with the 59.4% at the end of 1994 (Table 27 and Figure 16).

Table 27 - Coverage of the Population (as at end of period)

	1994	1995	1996
Total participants	12 579 072	19 123 278	20 039 671
Population	21 196 205	21 304 000	21 471 000
Share	*59.4%*	*89.8%*	*93.4%*

Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Figure 16 - Coverage of the Population (as at end of period)



Sources : DOH, Health and Vital Statistics 1996
CEPD, Taiwan Statistical Data Book 1997

Coverage of Health and Medical Care Institutions

14.2 As at the end of 1996, 15 429 (91.3%) hospitals and clinics were contracted with the BNHI. This meant that patients would have a wider choice in times of illness, injury and child delivery. Table 28 shows the breakdown.

Table 28 - Coverage of Health and Medical Care Institutions (as at end-1996)

	Total	Hospitals	Clinics	Chinese medicine hospitals	Chinese medicine clinics	Dental clinics
Total health and medical care institutions	16 909	695	9 094	97	2 073	4 995
Contracted health and medical care institutions	15 429	661	8 094	88	1 727	4 859
Contracting rate	*91.3%*	*95.1%*	*89.0%*	*90.7%*	*83.3%*	*97.3%*

Sources : BNHI, Internet Homepage - http://www.nhi.gov.tw/
DOH, Internet Homepage - http://www.doh.gov.tw/

Coverage of Health and Medical Care Services

14.3 The NHI Programme covers more medical services than the previous insurance programmes (Table 10). All the health and medical services covered by the previous insurance programmes are also covered by the NHI Programme. As the NHI Programme is a centralized insurance programme, it has a larger pool of insured persons and resources to share risks.

Government Health Care Expenditure

14.4 Government health care expenditure fell in 1995 and further in 1996 (paragraphs 10.3-10.5 and Table 20). This was in part due to the launch of the NHI Programme. As the NHI Programme covers more health services and a larger population, some services no longer required Government financing; hence, Government health care expenditure fell accordingly. However, Government health care expenditure does not include premiums paid by the Government as a third party contributor or as employer to the BNHI. If this is included in the Government health care expenditure, it is uncertain whether the overall amount would be higher than before the introduction of the NHI Programme.

Private Health Care Expenditure

14.5 Private health care expenditure fell in 1995 (paragraph 11.2 and Table 22). This was in part due to the launch of the NHI Programme. As the NHI Programme has a larger coverage of health services and population, certain services no longer require financing from the private sector; hence, private health care expenditure fell accordingly. However, private health care expenditure does not include premiums paid by individuals and employers to the BNHI. If this is included in private health care expenditure, it is uncertain whether the overall amount would be higher than before the introduction of the NHI Programme.

Finance of the BNHI

14.6 The BNHI is able to finance its expenditure on its own. In both 1995 and 1996, the BNHI ran surpluses of NT$37,479 million and NT$22,981 million respectively (Table 29). These surpluses are transferred to the Reserve Fund, which may be used to finance the expenditure of the BNHI in years of deficits. The BNHI has not required subsidy by the Government because of its sound financial position.

Table 29 - Income and Expenditure of the BNHI (NT$ billion)

	Annual		**Monthly**		
Income	**1995 ***	**1996**	**1995**	**1996**	**Growth rate**
Total	200.1	244.2	20.01	20.35	1.7%
Premium	*194.2*	*239.5*	*19.42*	*19.96*	2.8%
Other	*5.9*	*4.7*	*0.59*	*0.79*	33.9%
Expenditure	**1995 ***	**1996**	**1995**	**1996**	**Growth rate**
Total	162.6	221.2	16.26	18.43	13.3%
Medical	*156.8*	*212.8*	*15.68*	*17.73*	13.1%
Other	*5.8*	*8.4*	*0.58*	*0.70*	20.7%
Balance (Transfer to Reserve Fund)	37.5	23.0	3.75	1.92	not applicable

Remark : * Since the NHI Programme was launched in March 1995, the figures in 1995 were the values for the ten months in 1995.

Sources : BNHI, Internet Homepage - http://www.nhi.gov.tw/
DOH, Internet Homepage - http://www.doh.gov.tw/

14.7 Although the BNHI was able to run surpluses in 1995 and 1996, there would be pressures on its finance in the years ahead due to the rapid increase in medical expenses. On a **monthly** basis, average premium income increased by 2.8% in 1996 whereas medical expenditure increased by 13.1% in the same year (Table 29).

14.8 Another factor that may affect the finance of the BNHI is that the unemployed do not need to contribute to the NHI Programme but remain eligible to the benefits of the Programme for six months provided they have contributed to the BNHI for two years. As there were 15.5 million beneficiaries (77%) at the end of 1996 on an employment-related basis, an economic downturn may bring about pressures on the finance of the BNHI.

Cost Recovery

14.9 Co-payment has constituted a small share in the medical cost incurred, which may not be sufficient to prevent mis-use of medical services. For in-patient services, co-payment accounts for 5.91% of the cost. For out-patient services, cost recovery for district hospitals, regional hospitals and medical centres is about 6%-7.5% whereas that for clinics ranges from 5%-13%.

Contribution Shares of the Premium

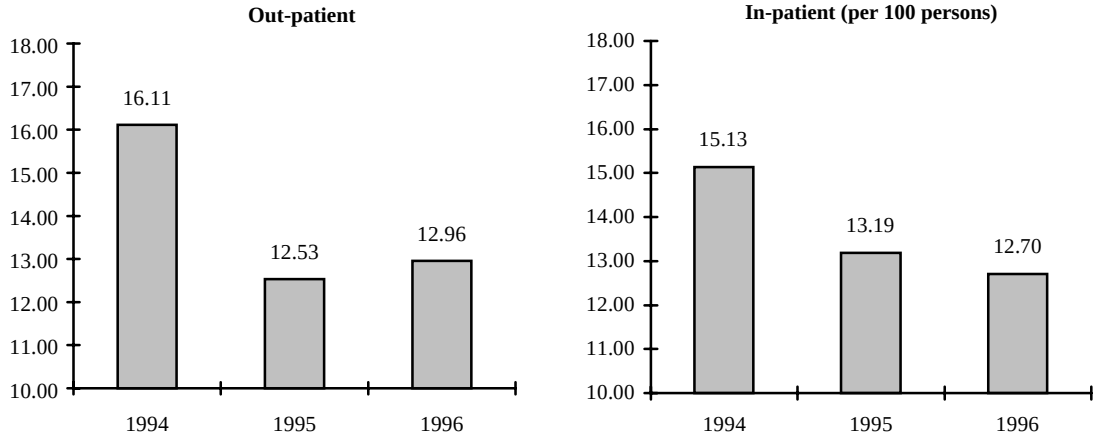
14.10 The Government contributes to the NHI Programme as a third party contributor, with contribution shares varying with the item of the insured. Only for item 4 (i.e. employers or self-employed persons) and item 5 (independently practising professionals and technicians) are contribution shares of the Government zero. Owing to the fact that the BNHI does not have a detail breakdown on the premiums collected from each group, the RLS has not been able to understand the Government contribution pattern of the BNHI in the past three years.

Utilization of Health and Medical Care Services

14.11 Between 1990 to 1994, the average annual growth rate for the number of out-patient per capita per year was 9.9%. It was 16.11 visits in 1994 (Figure 17). After the implementation of the NHI Programme in March 1995, the number dropped to 12.53 visits in 1995. The factors which caused the decline included the initiation of the co-payment system and the beneficiaries' unfamiliarity with the use of the new health insurance card. The utilization rate increased slightly in 1996 to 12.96 visits, as people got used to the health insurance card.

14.12 Reduction in the utilization of in-patient services is also observed. This could be the effect of the co-payment system (paragraph 7.19). The figure fell from 15.13 visits per 100 persons in 1994 to 13.19 visits per 100 persons in 1995, and further to 12.70 visits per 100 persons in 1996. Figure 17 shows the utilization of health and medical care services and breakdown by in-patient and out-patient services.

Figure 17 - Utilization of Health and Medical Care Services (Per Capita Per Year Visits)



Source : BNHI

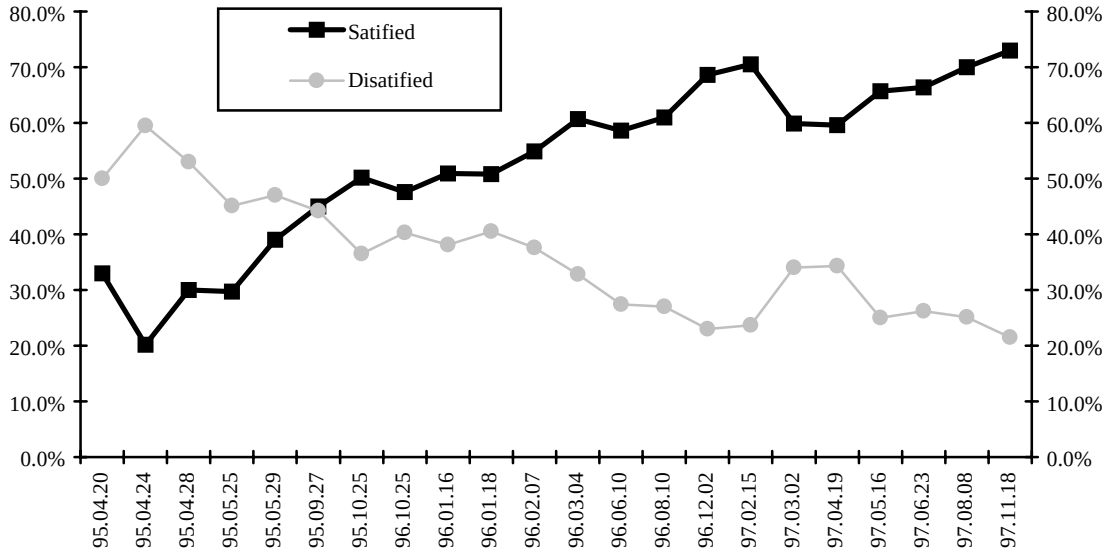
Waiting Time

14.13 It is worth noting that most health and medical care service providers in Taiwan do not report to have the problem of waiting time for both out-patient and in-patient services. This is probably due to the increase in medical facilities and personnel over the years (Table 5).

Public Satisfaction

14.14 Opinion polls have been carried out by the media to assess the public's support for the NHI Programme. It has been found that those who are satisfied with the Programme have been on the increase while those who are not satisfied with the Programme have been on the decline (Figure 18).

Figure 18 - Public Satisfaction of the NHI Programme



Source : BNHI

14.15 The major criticisms of those who are not satisfied with the NHI Programme are that :

- the premium rate is too high;
- the insured have to pay the premiums on the one hand and the co-payment medical fees for medical services on the other;
- the quality of services; and
- the time for medical consultation is too short.

15. Health Care Expenditure and Financing and Health Outcomes in Hong Kong and Taiwan

Health Care Expenditure in Hong Kong and Taiwan

15.1 Total health care expenditure of Hong Kong was HK$59,661 million in 1996, about half of that of Taiwan (Table 30). On a per capita basis, health care expenditure of Hong Kong was HK$9,455 in the year, higher than that of Taiwan, which was HK$5,237. In terms of percentage of GDP, health care expenditure in Hong Kong was 4.8% of GDP in 1996 whereas health care expenditure in Taiwan was 5.4% of GDP of Taiwan. However, because Hong Kong and Taiwan have very different population sizes, demographic structure, and geographical characteristics, direct comparison is difficult. In addition, health care expenditure is calculated on a different basis in the two places. For instance, health care expenditure in Hong Kong does not include spending on the construction of medical facilities, medical research, administration cost of insurance programmes while spending on all these items are included in health care expenditure in Taiwan.

Health Care Financing in Hong Kong and Taiwan

15.2 In the financing of health care services, financing arrangements in Hong Kong and Taiwan are again very different. In Hong Kong, 58.0% of the money came from the private sector in 1996 whereas the remaining 42.0% came from the public sector. However, it should be noted that figures on Hong Kong health care financing have not included the amount of health care financed indirectly through insurance companies and charitable organizations. If figures from these sources are included, the percentage of private health care financing in Hong Kong may be higher. At the same time, the public sector share in health care financing in Hong Kong may be higher if financing for construction of health care facilities and medical research is taken into account.

15.3 On the contrary, health care financing in Taiwan relies on the centrally managed insurance system, which accounted for 54.0% of total health care financing in 1996. The private sector accounted for 35.7% of total health care financing while the Government represented the remaining 10.3%. Although the NHI Programme plays an important part in the financing of health care services in Taiwan, it is an insurance system which collects premiums from the Government and private individuals and employers. The NHI Programme finances health care services only indirectly. If the breakdown of premium contribution were available, the relative importance of Government health care financing and private sector health care financing could be established.

Table 30 - Health Care Expenditure and Financing and Health Outcomes in Hong Kong and Taiwan, 1996

	Hong Kong[1]	Taiwan[2]
Health Care Expenditure		
Total health care expenditure (HK$ million)	59,661	112,293
Per capita health care expenditure (HK$)	9,455	5,237
Total health care expenditure/GDP (%)	4.8	5.4
Public health care expenditure/GDP (%)[3]	*2.0*	*0.6*
Private health care expenditure/GDP (%)	*2.8*	*1.9*
Health care expenditure of the insurance system/GDP (%)	*not applicable*	*2.9*
Health Care Financing		
Total health care financing (HK$ million)	59,661	112,293
Public health care financing/total health care financing (%)[3]	*42.0*	*10.3*
Private health care financing/total health care financing (%)	*58.0*	*35.7*
Health care financing of the insurance system/total health care financing (%)	*not applicable*	*54.0*
Health Outcomes[4]		
Life expectancy at birth (year) : Male Female	76.3 81.8	71.9 77.8
Infant mortality rate (per 1 000 live births)	4.1	5.4
Crude death rate (per 1 000 population)	5.1	7.6
Leading causes of death	1. Malignant neoplasm 2. Heart diseases 3. Pneumonia 4. Cerebrovascular diseases 5. Injury and poisoning	1. Malignant neoplasm 2. Cerebrovascular diseases 3. Accidents and adverse effects 4. Heart diseases 5. Diabetes mellitus

Remarks :
1. Please refer to RP01/PLC and RP06/PLC for detailed analysis on Hong Kong's health care delivery system and health care expenditure and financing.
2. The exchange rate of the New Taiwan dollar averaged NT$1.00=HK$0.274 against the Hong Kong dollar in 1996.
3. The word "Public" is equivalent to "Government" in the case of Taiwan because all health authorities in Taiwan operate under the DOH whereas Hospital Authority in Hong Kong is a public body.
4. Health outcomes for Taiwan are 1995 figures.

Sources : RLS, Health Care Expenditure and Financing in Hong Kong, RP01/PLC
DOH, Health and Vital Statistics 1996
DOH, Internet Homepage - http://www.doh.gov.tw/
BNHI, Internet Homepage - http://www.nhi.gov.tw/

Health Outcomes

15.4 Table 30 shows that health outcomes in Hong Kong, which compare favourably with those in Taiwan. These include longer life expectancy, lower infant mortality rate, and lower crude death rate. However, health outcomes do not necessarily have a causal relationship with the financing arrangements of a place. Life expectancy and death rate, for instance, are affected by a number of factors such as technological level of the health and medical care industry, prevalence of violent crime, and serious accidents. For example, accidents and adverse effects are among the top five causes of death in Taiwan.

PART 7 - CONCLUDING REMARKS

16.1 The NHI Programme has been implemented for three years. While it may be too early to make an overall assessment over the NHI Programme, statistics up to 1996 (the first two years of implementing the NHI Programme) suggest that the NHI Programme has a larger coverage in terms of population, health and medical care services, and health and medical care institutions.

16.2 With the NHI Programme, both Government health care financing and private health care financing fell. Notice however that the amount does not include premiums paid to the NHI Programme. If this is included, it is uncertain whether or not and how much overall financing has increased.

16.3 Although the BNHI had surpluses in the first two years of operations, there were pressures on its finance in the future owing to the rapid increase in medical expenses. In addition, the co-payment amounts constitute only a small proportion of the medical cost, which may not be enough to deter the problem of moral hazard, i.e. the mis-use of medical services irrespective of costs.

16.4 The major concern in the implementation of the NHI Programme is that premium contribution would be an additional burden for the taxpayers as both the insured and the employers have to contribute to the Programme.

16.5 Another concern is that a government department has to be set up to run the insurance programme. Medical experts have to be recruited to ensure the provision of a wide range of health and medical care services while other experts are needed to assess the level of premiums and medical expenses. This may have manpower implications in the industries involved.

16.6 The Taiwan experience may be able to offer some lessons to places which intend to move towards a centralized insurance system.

Appendix I

Population and Population by Sex (as at end of period)

	Number (1 000 persons)			Population density per square km.
	Total	Male	Female	
1952	8 128	4 156	3 972	226.03
1955	9 078	4 647	4 431	252.43
1960	10 792	5 525	5 267	300.11
1965	12 628	6 491	6 137	351.17
1968	13 650	7 030	6 620	379.59
1969	14 335	7 554	6 781	398.62
1970	14 676	7 733	6 943	408.11
1971	14 995	7 895	7 100	416.74
1972	15 289	8 037	7 252	424.91
1973	15 565	8 175	7 390	432.58
1974	15 852	8 315	7 537	440.57
1975	16 150	8 464	7 686	448.83
1976	16 508	8 641	7 867	458.79
1977	16 813	8 794	8 019	467.16
1978	17 136	8 957	8 179	476.13
1979	17 479	9 127	8 352	485.51
1980	17 805	9 288	8 517	494.58
1981	18 136	9 449	8 687	503.76
1982	18 458	9 606	8 852	512.72
1983	18 733	9 740	8 993	520.36
1984	19 013	9 876	9 137	528.12
1985	19 258	9 994	9 264	534.95
1986	19 455	10 087	9 368	540.40
1987	19 673	10 190	9 483	546.46
1988	19 904	10 302	9 602	552.88
1989	20 107	10 398	9 709	558.54
1990	20 353	10 516	9 837	565.36
1991	20 557	10 615	9 942	571.02
1992	20 752	10 708	10 044	576.46
1993	20 944	10 797	10 147	581.78
1994	21 196	10 880	10 316	586.83
1995	21 304	10 962	10 342	591.78
1996	21 471	11 037	10 434	596.43

Source : CEPD, Taiwan Statistical Data Book 1997

Appendix II

Population and Population by Age Group (as at end of period) (Number in '000)

	Total	Age Group			Dependence Ratio (%)	Ageing Index (%)
		Under 15 (A)	15-64 (B)	65 & Over (C)		
1952	8 128	3 442	4 483	203	81.3	5.9
1955	9 078	3 941	4 915	222	84.7	5.6
1960	10 792	4 904	5 620	268	92.0	5.5
1965	12 628	5 667	6 626	335	90.6	5.9
1968	13 650	5 794	7 474	382	82.6	6.6
1969	14 335	5 806	8 125	404	76.4	7.0
1970	14 676	5 821	8 426	429	74.2	7.4
1971	14 995	5 805	8 737	453	71.6	7.8
1972	15 289	5 796	9 013	480	69.6	8.3
1973	15 565	5 769	9 292	504	67.5	8.7
1974	15 852	5 733	9 586	533	65.4	9.3
1975	16 150	5 705	9 881	564	63.4	9.9
1976	16 508	5 723	10 186	599	62.1	10.5
1977	16 813	5 705	10 465	643	60.7	11.3
1978	17 136	5 699	10 755	682	59.3	12.0
1979	17 479	5 713	11 042	724	58.3	12.7
1980	17 805	5 714	11 329	762	57.2	13.3
1981	18 136	5 731	11 606	799	56.3	13.9
1982	18 458	5 763	11 857	838	55.7	14.5
1983	18 733	5 768	12 090	875	54.9	15.2
1984	19 013	5 737	12 353	922	53.9	16.1
1985	19 258	5 696	12 589	973	53.0	17.1
1986	19 455	5 640	12 788	1 027	52.1	18.2
1987	19 673	5 583	13 001	1 089	51.3	19.5
1988	19 904	5 562	13 200	1 142	50.8	20.5
1989	20 107	5 527	13 383	1 197	50.2	21.7
1990	20 353	5 510	13 579	1 264	49.9	22.9
1991	20 557	5 412	13 804	1 341	48.9	24.8
1992	20 752	5 347	13 994	1 411	48.3	26.4
1993	20 944	5 266	14 193	1 485	47.6	28.2
1994	21 196	5 156	14 483	1 557	46.4	30.2
1995	21 304	5 062	14 616	1 626	45.8	32.1
1996	21 471	4 970	14 819	1 682	44.9	33.8

Remarks : The dependence ratio $= \frac{A+C}{B}$ x 100 while the ageing index $= \frac{C}{A}$ x 100 .

Source : CEPD, Taiwan Statistical Data Book 1997

Appendix III

Gross Domestic Product (GDP) and Per Capita GDP

	GDP (NT$ million)		Per Capita GDP (NT$)	
	at current prices	at 1991 prices	at current prices	at 1991 prices
1952	17,251	183,090	2,122	22,526
1955	29,981	237,045	3,303	26,112
1960	62,507	327,896	5,792	30,383
1965	112,627	515,628	8,919	40,832
1968	169,904	678,758	12,447	49,725
1969	196,845	739,495	13,732	51,587
1970	226,805	823,581	15,454	56,118
1971	263,676	929,784	17,584	62,006
1972	316,172	1,053,607	20,679	68,913
1973	410,405	1,188,812	26,367	76,377
1974	549,577	1,202,625	34,667	75,866
1975	589,651	1,261,896	36,511	78,136
1976	707,710	1,436,804	42,871	87,037
1977	828,995	1,583,209	49,306	94,166
1978	991,602	1,798,427	57,867	104,950
1979	1,195,838	1,945,430	68,416	111,301
1980	1,491,059	2,087,472	83,744	117,241
1981	1,773,931	2,216,116	97,813	122,194
1982	1,899,971	2,294,815	102,935	124,326
1983	2,100,005	2,488,657	112,102	132,849
1984	2,343,078	2,752,443	123,236	144,766
1985	2,473,786	2,888,758	128,455	150,003
1986	2,855,180	3,225,062	146,758	165,770
1987	3,237,051	3,635,979	164,543	184,821
1988	3,523,193	3,921,060	177,009	196,999
1989	3,938,826	4,243,891	195,893	211,065
1990	4,307,043	4,472,799	211,617	219,761
1991	4,810,705	4,810,705	234,018	234,018
1992	5,337,693	5,136,014	257,213	247,495
1993	5,874,513	5,460,471	280,487	260,718
1994	6,376,498	5,817,402	301,832	275,367
1995	6,892,046	6,186,052	323,509	290,370
1996	7,497,677	6,519,942	349,200	303,663

Source : CEPD, Taiwan Statistical Data Book 1997

Appendix IV

Inflation Rate, Unemployment Rate and Exchange Rate

	Inflation rate (%)	Unemployment rate (%)	Exchange Rate (NT$ per unit US dollar)
1952	-	4.4	10.28
1955	-	3.8	15.60
1960	18.5	4.0	36.23
1965	-0.1	3.3	40.05
1968	7.9	1.7	40.05
1969	5.0	1.9	40.05
1970	3.6	1.7	40.05
1971	2.8	1.7	40.05
1972	3.0	1.5	40.05
1973	8.2	1.3	38.00
1974	47.5	1.5	38.00
1975	5.2	2.4	38.00
1976	2.5	1.8	38.00
1977	7.0	1.8	38.00
1978	5.8	1.7	36.00
1979	9.7	1.3	36.03
1980	19.0	1.2	36.01
1981	16.3	1.4	37.84
1982	3.0	2.1	39.91
1983	1.4	2.7	40.27
1984	0.0	2.5	39.47
1985	-0.2	2.9	39.85
1986	0.7	2.7	35.50
1987	0.5	2.0	28.55
1988	1.3	1.7	28.17
1989	4.4	1.6	26.16
1990	4.1	1.7	27.11
1991	3.6	1.5	25.75
1992	4.5	1.5	25.40
1993	2.9	1.5	26.63
1994	4.1	1.6	26.24
1995	3.7	1.8	27.27
1996	3.1	2.6	28.25

Source : CEPD, Taiwan Statistical Data Book 1997

Appendix V

Training Courses Offered

	1991		1992		1993		1994		1995	
	class	person	class	person	Class	person	class	person	class	person
Total	12	321	16	447	25	797	22	763	22	759
Basic public health	3	86	3	84	2	61	2	65	2	67
Topic-oriented course	9	235	13	363	23	736	20	698	20	692
Health administration	1	25	1	30						
Processing of documents & data	1	19	1	20	1	34	1	31	1	33
Data processing & statistical analysis			1	23	1	34	1	32		
Hospital management	1	28	1	31	1	32	1	33	1	33
Health insurance	1	24	1	26	2	64	2	60		
Mental health	1	30	1	30						
Primary health care									1	66
Occupational health					1	33	1	33		
Communicable disease control			1	27	1	31	1	32	1	34
Health education	1	26					1	32		
Genetic health	1	31								
Emergency medical care	1	27	1	30	1	34	1	32	1	34
Control of Poliomyelitis			1	31	1	33				
Medical information network			1	30						
Laws & Regulations			1	30	3	95	1	34	1	32
Health policy & management					1	24	1	28		
Medical care network plan					1	34	1	30		
Counselling for HIV/AIDS					1	32				
Psychological application for HIV/AIDS					1	26				
Medical library					1	36	1	33	1	32
Sanitary control of business firm					1	32	1	32	1	33
Mental health administration					1	31	1	29	1	33
Chronic disease control					2	67	1	34		
Health planning & evaluation	1	25	1	25	1	30	1	31	1	32
Health education & communication			1	30	1	34	1	32		
Oral health							1	31	1	34
Health promotion & health education							1	32	1	34
Control of STD & AIDS							1	34	1	32
Principles of death classification							1	33		
Health of the elderly & long-term care									1	33
Health education for diabetes									1	33
Control of pharmaceutical affairs									1	33
Management of public hospitals									1	32
Health of women									1	34
Cost-analysis of medical care									1	32
Control of occupational diseases									1	33

Source : DOH, Health and Vital Statistics 1996

Appendix VI

NHI Programme
The Graded Salary and Actual Monthly Salary (NT$)

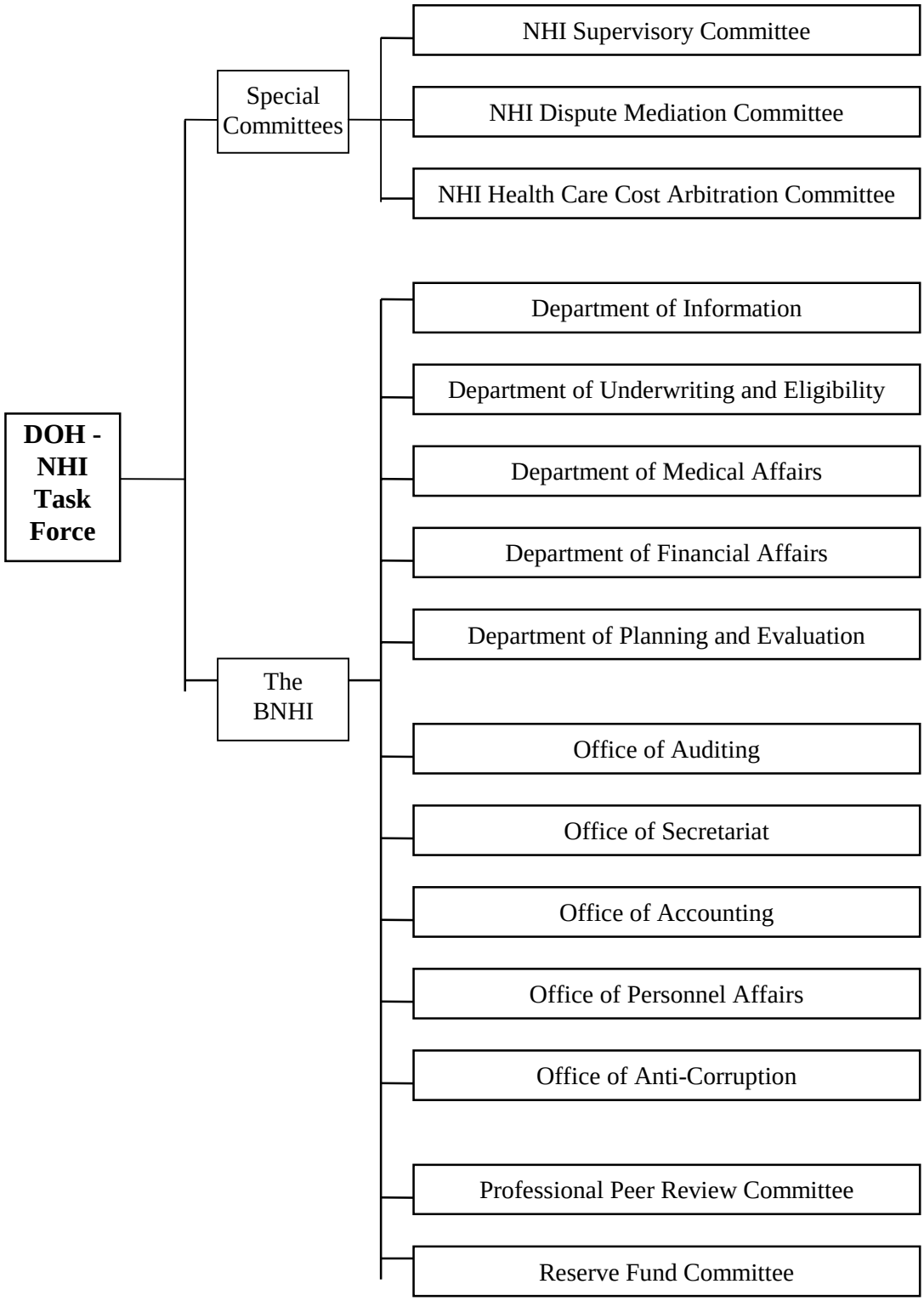
The amount of each grade is the maximum amount of the corresponding salary range.

Grade	Graded salary	Actual monthly salary
1	15,360	15,360 and below
2	15,600	15,361 - 15,600
3	16,500	15,601 - 16,500
4	17,400	16,501 - 17,400
5	18,300	17,401 - 18,300
6	19,200	18,301 - 19,200
7	20,100	19,201 - 20,100
8	21,000	20,101 - 21,000
9	21,900	21,001 - 21,900
10	22,800	21,901 - 22,800
11	24,000	22,801 - 24,000
12	25,200	24,001 - 25,200
13	26,400	25,201 - 26,400
14	27,600	26,401 - 27,600
15	28,800	27,601 - 28,800
16	30,300	28,801 - 30,300
17	31,800	30,301 - 31,800
18	33,300	31,801 - 33,300
19	34,800	33,301 - 34,800
20	36,300	34,801 - 36,300
21	38,200	36,301 - 38,200
22	40,100	38,201 - 40,100
23	42,000	40,101 - 42,000
24	43,900	42,001 - 43,900
25	45,800	43,901 - 45,800
26	48,200	45,801 - 48,200
27	50,600	48,201 - 50,600
28	53,000	50,601 and above

Source : BNHI, Booklet on National Health Insurance

Appendix VII

The NHI Administrative Framework



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