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Health Care Expenditure and Financing in Singapore

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C O N T E N T S

EXECUTIVE SUMMARY

1. Singapore's health care philosophy emphasizes individuals' responsibility towards their health and health care expenditure. Singaporeans are required to save under the Medisave scheme to pay for hospitalization expenses. They are also encouraged to subscribe Medishield, the national insurance, to pay for the cost of treatment of prolonged or major illness. Those who cannot afford health care services can apply for financial assistance under Medifund; an endowment fund set up by the government.

2. Total health care expenditure in Singapore reached S$3,545 million in 1995 and per capita health care expenditure was S$1,182 in the same year. The percentage of GDP on health care remained low at around 3% between 1986 to 1995.

3. Public expenditure on health care in Singapore amounted to less than 1% of GDP and less than 10% of total government expenditure in 1995.

4. Private expenditure on health care on the other hand amounted to 2% of GDP in 1995 and has accounted for an increasing share of total private consumption expenditure since 1986. About 5% of the private consumption expenditure in 1995 were spent on health care.

5. Government funding accounted for about one-third of total health care financing between 1986 to 1995. There is a trend for the financial burden of health care to be shifted increasingly towards the private sector since the 1980s.

6. Private financing by individuals and organizations accounted for 70% of total health care financing between 1986 to 1995. About 10% of the private financing on health care came from withdrawals from Medisave accounts. The rest of the private financing for health care came from employers, private health insurance and savings of individuals.

7. The Singapore government is considering ways to finance long-term care since the present financing arrangements may not be able to finance this type of care. One of the proposals is to establish a long-term insurance scheme along the lines of the Medishield scheme.

8. Singapore has achieved a health outcome comparable to Hong Kong with a much lower level of health care expenditure. Singapore spent about 3% of its GDP on health care in 1995 while Hong Kong spent about 5% in the same year. Hong Kong people have a longer life expectancy than Singaporeans do but Hong Kong's infant mortality rate and crude death rate are higher than those in Singapore.

HEALTH CARE EXPENDITURE AND FINANCING IN SINGAPORE

PART 1 - INTRODUCTION

1. Background

1.1 The Legislative Council Panel on Health Services requested during its meeting on 19 April 1999 the Research and Library Services Division (RLS) to research into the health care expenditure pattern and financing arrangements in Singapore. This report forms part of the RLS series of research on overseas health care financing systems.

2. Objective and Scope

2.1 The objective of this research is to analyze the expenditure pattern and financing arrangements of the health care system in Singapore.

2.2 The scope of the research is as follows :

- describe the health care system in Singapore;
- describe and analyze the health care expenditure pattern in Singapore; and
- describe and analyze the health care financing arrangements in Singapore.

3. Methodology

3.1 This study involves a combination of information collection, literature review and analysis.

3.2 Letters were sent to the Ministry of Health in Singapore to obtain information. In addition, information was collected through the Internet and books borrowed from local academic libraries.

PART 2 - THE HEALTH CARE SYSTEM IN SINGAPORE

4. Health Care Philosophy

4.1 Singapore aims to build up a healthy population through preventive health care programmes and the promotion of healthy living. Emphasis is placed on health education, immunization and health screening for early detection of diseases.

4.2 Another important pillar of Singapore's health care philosophy is the emphasis on personal responsibility for one's health. Singaporeans are required to save under the Medisave (see Section 8 for details) scheme for their hospitalization expenses, especially during old age. The government also encourages individuals to minimize the use of unnecessary medical services.

4.3 The Singapore government considers that it has the responsibility to intervene in the health care sector where the market fails to keep health care costs down. The government controls the supply of hospital beds and their distribution by class in each hospital. It also controls the introduction of new technology and the development in specialist department.

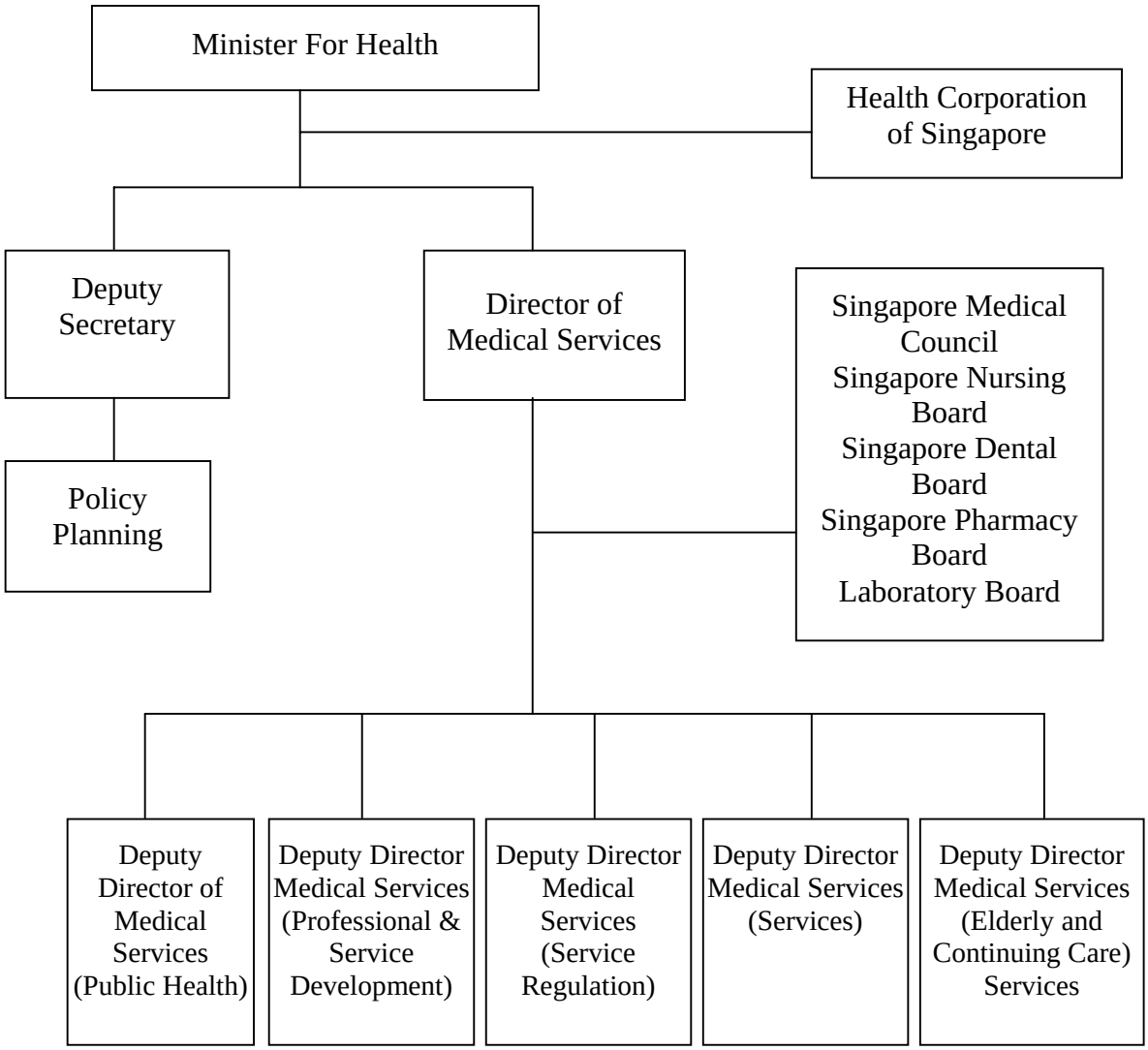
4.4 Lastly, the Singapore government has committed to be the provider of the last resort. The government provides heavily subsidized services at public hospitals and government polyclinics. Those who cannot afford health care services can apply for financial assistance under Medifund (see Section 8 for details).

5. Health Care Structure of Singapore

5.1 The Ministry of Health has the overall responsibility for the provision and regulation of health care services in Singapore (Figure 1). It formulates health policies and plans and develops health care facilities. It also provides preventive, curative and rehabilitative health care services through public hospitals and polyclinics. The Health Corporation of Singapore (HSC) which is the holding company for the public hospitals is also under the Ministry of Health. HSC was incorporated in 1987 and is wholly owned by the government.

5.2 The Director of Medical Services oversees the professional regulatory boards and the five divisions of medical services including those on Public Health, Services (hospitals, traditional medicine, forensic medicine, blood transfusion and pharmaceutical service) and Elderly and Continuing Care.

Figure 1 - Singapore's Public Health Care Structure



Source : Ministry of Health Singapore, Annual Report 1997/98.

6. Health Care Delivery System in Singapore

6.1 Singapore has a dual health care delivery system where individuals can choose between public and private providers.

6.2 For primary health care, 80% of the services are provided by private practitioners while the remaining 20% by government polyclinics. For the more costly hospital care, it is the reverse situation with 80% of the hospital care being provided by the public sector and the remaining 20% by the private sector.

Primary Health Care Services

6.3 In Singapore, primary health care services include curative out-patient medical treatment, health screening, preventive health programmes for school children, home nursing, day care and rehabilitation for the elderly, health education and promotion.

6.4 There are 15 government polyclinics throughout the country providing one-stop services to the public. The services provided by the public clinics include the following:

- medical treatment for acute and chronic illnesses;
- follow-up of patients discharged from hospitals;
- maternal (antenatal & postnatal) & child health (immunization and developmental assessment);
- health screening including cervical and breast cancer screening;
- health education;
- minor surgical procedures;
- clinical laboratory;
- X-ray facility;
- pharmacy;
- dietician service;
- medical social work service;
- psychiatric care;
- dental care;
- rehabilitation; and
- home nursing.

6.5 There are 2 080 licensed private clinics in Singapore, comprising 1 623 medical clinics, 419 dental clinics and 38 dental cum medical clinics. About 80% of the primary care in Singapore are delivered by private clinics.

6.6 The average out-patient consultation fee (inclusive of medication) of government polyclinics is about S$10 to S$15. Children and the elderly aged 60 years would have concession up to 50%.

Hospital Services

6.7 There are more than 11 000 hospital beds in Singapore, giving a ratio of three beds per 1 000 population. About 80% of the total hospital beds are in the 10 public hospitals (Table 1). Public hospitals also provide 24-hour Accident & Emergency (A&E) services.

Table 1 – Number and Percentage of Beds in Public and Private Hospitals

	Number of beds	**Percentage (%)**
Public hospitals	9 091	80.6
Private hospitals	2 185	19.4
Total	11 276	100

Source : Singapore Ministry of Health

6.8 There are four classes of beds in public hospitals. The classification is based on the number of beds per room and the level of physical amenities such as air-conditioning. The classification is as follows:

- Class A : 1-2 beds per room
- Class B : 3-4 beds per room (with or without air-conditioning)
- Class B2 : 6-10 beds per room
- Class C : open ward

6.9 About 60% of the public hospital beds are Class B2 and Class C while the rest are private (Class A) or semi-private (Class B) beds. Patients pay more when they request higher levels of physical amenities. The provision of medical care is similar for all types of accommodation. The subsidy rates are 80% for Class C ward, 65% for Class B2 ward, 20% for Class B ward and 0% for Class A ward.

6.10 There are 13 private hospitals in Singapore, which provide 20% of the country's hospital beds. Private hospitals only offer the top two tiers (Classes A and B) of hospital beds.

6.11 The average length of stay in general hospitals is about 5.5 days. The occupancy rates of public hospitals and private hospitals were 84% and 65% respectively in 1996.

Long-term Care Services

6.12 Long-term care (such as care at community hospitals, nursing homes, day rehabilitation and home visit etc.) in Singapore is mainly provided by voluntary welfare organizations, with support from the government. The government provides up to 90% of capital funding and up to 50% of operating expenditure for long-term care institutions run by voluntary welfare organizations. The voluntary welfare organizations raise the rest of their funding through community donations.

6.13 There are 426 community hospital beds for elderly patients who require longer in-patient care. There are a total of 4 705 nursing home beds, 70% of which are provided by voluntary welfare organizations and the remaining by commercial organizations. There are 17 day rehabilitation centres providing 600 day care places for the elderly. In addition, six voluntary welfare organizations provide home care services such as home medical, nursing and home help services.

Dental Care Services

6.14 The government runs 187 school dental clinics to provide free dental care for school children. The government also provides dental care at six mobile clinics, polyclinics and military camps. The majority of the population obtains dental care from the 452 private dental clinics.

PART 3 - HEALTH CARE FINANCING IN SINGAPORE

7. Development of Singapore's Health Care Financing Arrangements

7.1 Medical services in Singapore were provided mainly by the public sector and financed through general taxes prior to the reform in the 1980s. Medical services generally were provided free or at a nominal charge.

7.2 This was changed in 1981 when the Minister for Health announced that "a cradle-to-grave health system, like that of the British National Health Service and those of other welfare states, was not for Singapore"[1].

7.3 Two major changes were made in the 1980s and they were the shifting of the financial burden of health care from the government to individuals and employers and the corporatisation of government hospitals.

National Health Plan

7.4 The National Health Plan (NHP) was announced in February 1983 and the declared objectives of the NHP were to secure a healthy, fit and productive population through active disease prevention and promotion of healthy lifestyles, and to improve cost-efficiency in the health care system. It would also meet the growing demand of a rapidly aging population for increased health care. Under this plan, the Medisave scheme (a compulsory savings scheme) was introduced in 1984 to meet rising medical expenditure. The Medisave account in the Central Provident Fund (CPF) allows members to withdraw funds from their accounts to pay for hospital services, within certain limits, of themselves and their immediate family members.

Hospital Restructuring

7.5 The Ministry of Health began restructuring the government hospitals in the late 1980s to form corporations outside the government with independent management. The objectives were to enable hospitals to be more flexible and autonomous in management and to promote greater cost awareness and financial discipline. These hospitals can decide on the employment and remuneration of their staff.

1 *Sunday Times*, 11 May 1981.

7.6 The government wholly owns the corporatised hospitals and these hospitals have to follow the broad policy guidelines laid down by the Ministry of Health. The corporatised hospitals receive an annual government subvention or subsidy for the provision of subsidized medical services on a per patient day basis. With an independent budget, these hospitals now have greater autonomy and flexibility in responding to patients' demand for health care services.

7.7 In response to concerns about the rising costs of health care services, the government in 1991 set up a Ministerial Committee to review the state's role in containing the long term increase in costs and subsidies. A White Paper, entitled "Affordable Health Care" based on the Committee's recommendations was released in 1993. It set out the government's philosophy and approach in controlling health care costs to keep basic health care affordable to all Singaporeans. The approach consists of the following three areas of control:

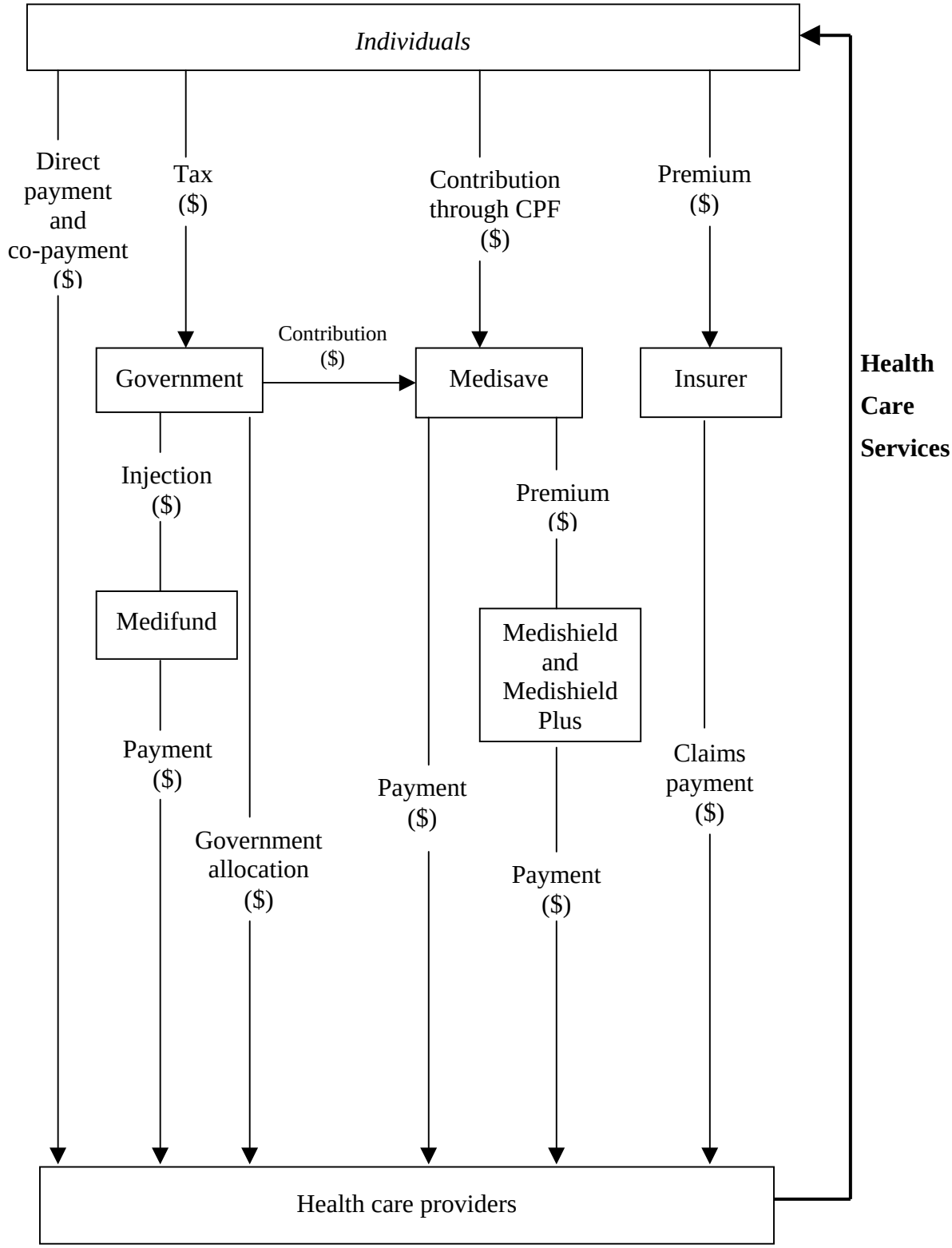
- public hospitals: subject to control in key areas of pricing and operations;
- private sector patients using Medisave: subject to control on charges above Medisave reimbursement limits; and
- private sector patients on their own: subject to minimal control.

8. Financing Methods

8.1 There are basically four payers for health care in Singapore: the individual, the employer, the insurer and the government. The individual pays for health care services in the form of direct payment, co-payment or deductibles, insurance premium and Medisave contribution. The employer pays premium for the employees' medical insurance schemes and contributes to Medisave. The government as an employer also contributes to Medisave. In addition, it subsidies the provision of health care services to those who cannot afford to pay for the services.

8.2 Figure 2 describes the flow of funds from various financing sources to health care providers in return for services provided to individuals. Financing of health care by the government directly and indirectly through insurance schemes is classified as public financing for health care. Financing by individuals or organizations directly and indirectly is regarded as private financing for health care.

Figure 2 – Financing of Health Care Services



Public Financing for Health Care

Taxation

8.3 The government provides fund for subsidizing the provision of health care services and for promoting health. Personal income tax is levied on residents of Singapore at progressive rates on the previous year's income. Tax rates range from 2% to 28%. Companies are taxed on adjusted net profits less capital allowances. The corporate income tax rate is 26%. In 1995, tax revenue amounted to S$19.6 billion.

Medifund

8.4 Medifund is an endowment fund set up by the government in April 1993 to help needy Singaporeans pay their medical bills. Medifund provides the safety net for those who are so poor that they cannot even afford the charges at public hospitals and specialist out-patient clinics. Needy patients will have to apply for help, and the amount of financial assistance they receive depends on individual circumstances. To qualify for help from Medifund, a person must be a Singapore citizen who has received or will be receiving medical treatment at a Class B2 or Class C hospital ward or subsidized out-patient clinic and is unable to pay for the charges incurred.

8.5 Medifund started with an initial endowment of S$200 million from the government in 1993. With further government injections over the years, the balance in Medifund reached S$600 million in 1998.

8.6 The interest income from the endowment fund is distributed to the public hospitals to pay the hospital bills of the poor, who have to apply for hospital charges to be paid from the Medifund. Every public hospital has a Hospital Medifund Committee appointed by the government to consider and approve applications and allocate funds. Since its inception in 1993, 99% of those who applied to the Medifund were given financial assistance. There were 58 000 Medifund applications in 1997, with government spending amounting to S$13.1 million.

Private Financing for Health Care

8.7 Individuals and organizations have various sources of financing for health care. These sources include the government-administered schemes, Medisave and Medishield, private medical insurance and savings.

Medisave

8.8 Medisave is a compulsory savings scheme introduced by the government in 1984 to pay for the hospitalization needs of the individuals and their immediate family. Medisave covers roughly 85% of Singapore's population.

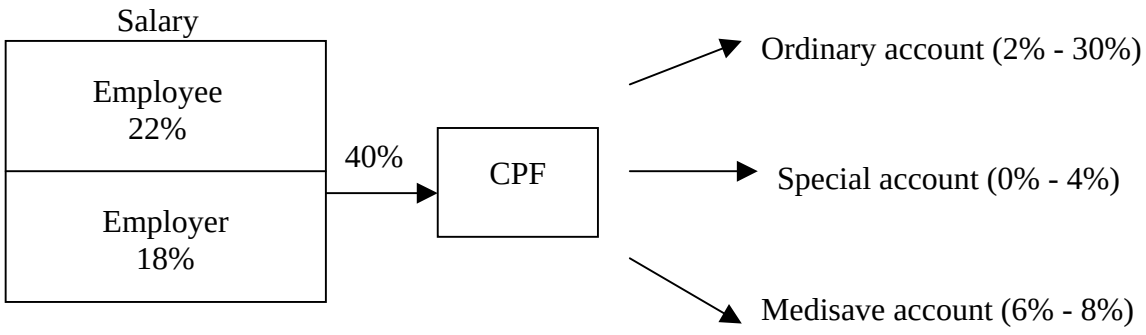
8.9 Medisave is an extension of CPF, which was established in 1955 to provide retirement protection for the working population. Singaporeans contribute 40% of their salaries to their CPF account: a 22% employee contribution matched by an 18% employer contribution. Out of the 40%, 6% to 8% are now used for Medisave (Table 2 and Figure 3). The total amount of contribution to Medisave is also currently subject to an annual limit of S$72,000 per account to avoid excessive build-up, which could result in unnecessary use of medical services.

Table 2 - Distribution of CPF Contribution

Employee's Age	Credited Into(%)			Total (%)
	Ordinary Account	Special Account	Medisave Account	
35 years & below	30	4	6	40
35 to 44 years	29	4	7	40
45 to 54 years	28	4	8	40
55 to 59 years	12	-	8	20
60 to 64 years	7	-	8	15
65 years & above	2	-	8	10

Source : Singapore 1998

Figure 3 - Funds Flow of CPF in Singapore



Source: Singapore 1998

8.10 Medisave covers expenses incurred at public or private hospitals up to a limit of S$300 per day for daily hospital charges and a fixed limit of S$150 to S$5,000 for surgical fees depending on the type of procedure as stipulated by the Ministry of Health. The use of Medisave requires cash co-payment from patients to prevent premature depletion of accounts. (In 1996, the average hospital charges were S$530 per day for Class C ward and S$2,700 for Class A ward in public hospitals and S$4,100 for Class A ward in private hospital.)

8.11 Medisave also covers certain expensive out-patient treatment such as:

- day surgery ;
- radiotherapy and chemotherapy ;
- renal dialysis ;
- assisted conception procedures, e.g. IVF ; and
- Hepatitis B vaccination.

8.12 Medisave can be used to pay for treatment cost of account-holders, their parents or children. Family members may also pool their accounts to pay a bill. Account-holders may also use their accounts to pay for the expenses of a more distant family member, provided that the patient's immediate family has completely drained its accounts.

8.13 Medisave also has a lifetime savings feature. At age 55, account-holders are allowed to withdraw their Medisave funds, leaving a minimum sum of S$16,000. Upon death, any balance left in a Medisave account becomes part of a person's estate and goes in bequest to family, friends, or charity. There were 2.6 million Medisave accounts in 1997, and total account balance amounted to S$17 billion.

Medishield and Medishield Plus

8.14 Medishield, a national insurance scheme for catastrophic illness was introduced in July 1990 to help meet the cost of large medical bills. (Catastrophic illness is defined as major or prolonged illness.) Medisave members aged less than 75 years are automatically included in Medishield unless they opt out. Medishield is designed to help members meet the medical expenses of treatment of serious or prolonged illnesses, which their Medisave balance would not be sufficient to cover.

8.15 Medishield premium is paid from Medisave contribution. Members may also use their Medisave contribution to pay Medishield premium for their dependents. Annual premium ranges from S$12 to S$240.

8.16 To avoid problems of moral hazard and discourage unnecessary consumption, the insured under Medishield is required to share the cost of treatment. The insured has to pay a sum of money (e.g. S$500 for Class C beds and S$1,000 for Class B2 beds) known as deductible every policy year. The benefits of Medishield are paid out when the deductible is used up. Medishield will pay 80% of the hospital bill in excess of the deductible, with the insured paying the remaining (which is known as co-insurance). Medishield pays up to S$120 a day for ward charges.

8.17 MediShield Plus is a scheme targeted at those using private hospitals or Class A and Class B wards in public hospitals. The scheme offers a two-tier plan (Plan A and Plan B). Plan A's claim limit is S$500 per day with a deductible of S$4,000 while Plan B's claim limit is S$300 per day with a deductible of S$2,500 per policy year. These include charges for room, boards, drugs and diagnosis.

8.18 At the end of 1995, Medishield covered 1.5 million people or 87% of eligible CPF members as well as a quarter million of their dependents. Payouts in 1995 totalled S$23.6 million for 43 919 claims. Cancer and chronic renal failure were the top two conditions for claims.

Private Medical Insurance

8.19 In addition to financing by government-administered health care financing schemes (Medisave and Medishield), individuals and organizations also finance part of the health care costs with private medical insurance. Private medical insurance covers about 750 000 employees and their dependents in Singapore and includes group insurance, which is paid for by employers and individually purchased insurance. The medical benefits provided by employers are considered as a business expense and are fully exempt from corporate tax. However, a cap at 2% of payroll was imposed in 1994 on the amount of medical expenses that can be exempt from tax as the government feared that tax-free employer medical benefits would inflate health care costs. The government encourages employers to convert medical benefits to additional Medisave contribution.

8.20 While private insurance companies are free to offer medical insurance schemes to the public in Singapore, approval from the Ministry of Health is needed if they wish to provide a scheme in which the insured is allowed to use his Medisave to pay for the premium. The proposed scheme must include features that support the national objectives for health care such as co-payment and guaranteed renewal of policies upon payment of premium.

Direct Payment

8.21 The Singaporeans with Medisave, Medishield or employer-provided medical insurance benefits have to pay deductibles and co-insurance. In addition, individuals also pay for over-the-counter and prescription drugs they consume.

PART 4 - ANALYSIS OF HEALTH CARE EXPENDITURE AND FINANCING

9. Health Care Expenditure Patterns

Total Health Care Expenditure

9.1 Total health care expenditure in Singapore reached S$3,545 million in 1995. It represented nearly 42 times that in 1960 and 2.7 times that in 1986 (Table 3). Total health care expenditure is the sum of what the government, individuals and organizations spend directly or indirectly on health care services, administration of health insurance programmes, health education and construction of health care facilities etc.

Table 3 - Total Health Care Expenditure and GDP in Singapore

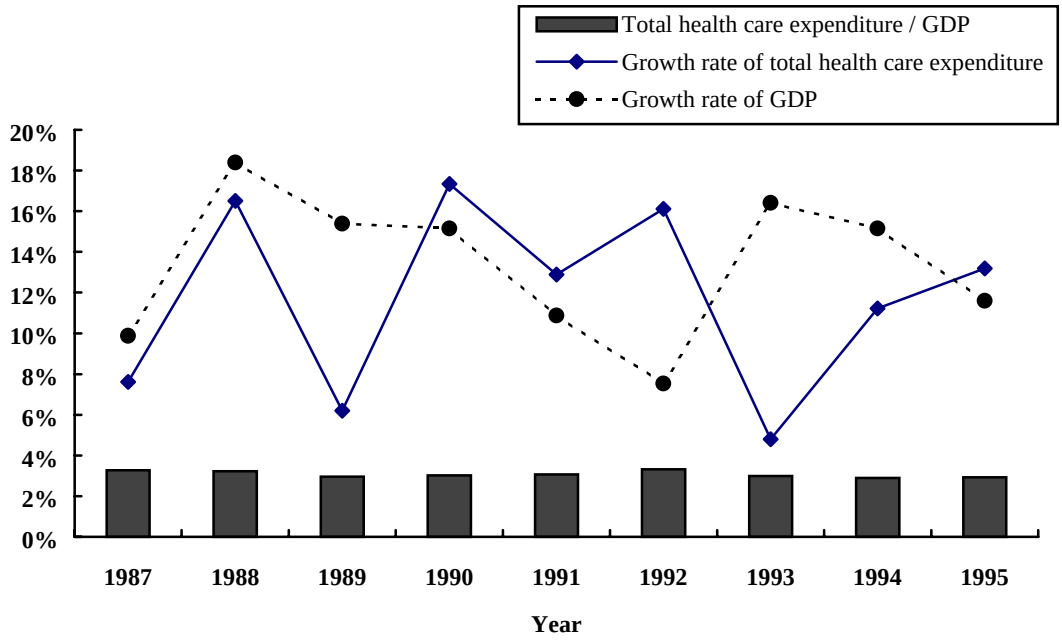
Year	1960	1970	1980	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
S$m													
Total health care expenditure (a)	85	203	635	1,312	1,412	1,645	1,747	2,050	2,314	2,687	2,816	3,132	3,545
GDP (b)	2,150	5,805	25,091	39,264	43,145	51,082	58,943	67,879	75,266	80,940	94,223	108,505	121,081
Population in million													
Population (c)	1.6	2.1	2.4	2.5	2.6	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.0
Growth rate (%)													
Growth rate of (a)	n.a.	n.a.	n.a.	n.a.	7.62	16.50	6.20	17.34	12.88	16.12	4.80	11.22	13.19
Growth rate of (b)	n.a.	n.a.	n.a.	n.a.	9.88	18.40	15.39	15.16	10.88	7.54	16.41	15.16	11.59
Growth rate of (c)	n.a.	n.a.	n.a.	n.a.	4.00	0.00	0.00	3.85	3.70	0.00	3.57	0.00	3.45
Distribution (%)													
(a)/(b)	3.95	3.50	2.53	3.34	3.27	3.22	2.96	3.02	3.07	3.32	2.99	2.89	2.93
S$m													
Per capita health care expenditure	53.1	96.7	264.5	524.8	543.1	632.7	671.9	759.3	826.4	959.6	971.0	1,080.0	1,181.7

Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

9.2 It is noted in Table 3 that the proportion of total health care expenditure to GDP fluctuated at around 3% to 4% since 1960. This is a very low percentage when compared to that of other developed countries. The OECD's mean percentage was 8.8% in 1985 and 10.4% in 1995. The percentage of GDP on health care started to decrease since 1986 and reached a low of 2.96% in 1989. This decreasing trend can be attributed to the combined effect of health care reform launched in the 1980s such as the introduction of Medisave, corporatisation of public hospitals and the implementation of various cost control measures.

9.3 It is noted in Figure 4 that there is no particular correlation between GDP growth and growth in health care expenditure. The growth in health care expenditure exceeded GDP growth in four years, 1990, 1991, 1992 and 1995.

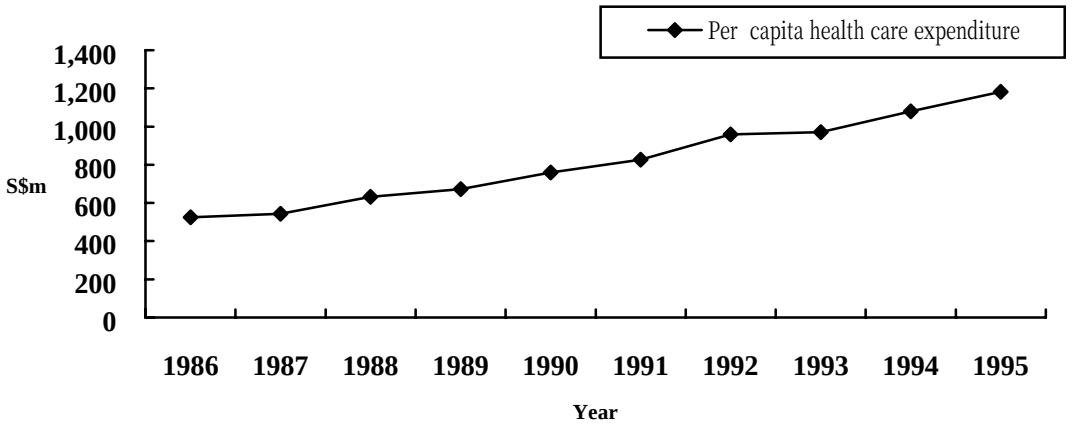
Figure 4 – Trend Growth Rates of Total Health Care Expenditure and GDP in Singapore, 1986-1995



Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

9.4 Health care expenditure per person has increased more than two times between 1986 and 1995 (Figure 5). Per capita health care expenditure was S$1,181.7 in 1995.

Figure 5 – Health Care Expenditure Per Person, 1986-1995



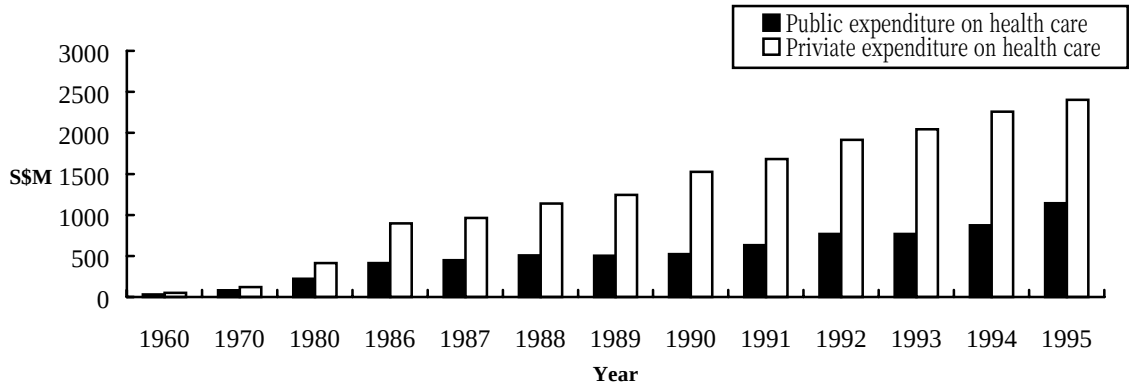
Source: Singapore Ministry of Health

Table 4 – Share of Public and Private Health Care Expenditure in Singapore

Year	1960	1970	1980	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
S$m													
Public expenditure on health care (a)	33	81	223	414	449	506	502	524	631	770	767	873	1,142
Private expenditure on health care (b)	52	122	412	898	963	1,139	1,245	1,526	1,683	1,917	2,049	2,259	2,403
Total health care expenditure (c)	85	203	635	1,312	1,412	1,645	1,747	2,050	2,314	2,687	2,816	3,132	3,545
Distribution (%)													
(a)/(c)	38.82	39.90	35.12	31.55	31.80	30.76	28.73	25.56	27.27	28.66	27.24	27.87	32.21
(b)/(c)	61.18	60.10	64.88	68.45	68.20	69.24	71.27	74.44	72.73	71.34	72.76	72.13	67.79

Source: Singapore Ministry of Health

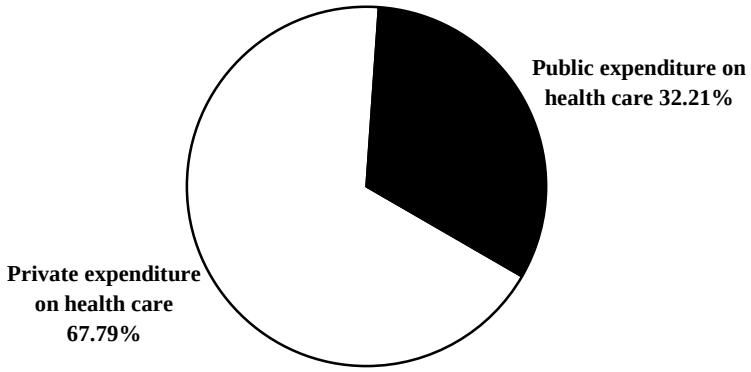
Figure 6 - Share of Public and Private Health Care Expenditure in Singapore



Source: Singapore Ministry of Health

9.5 Public expenditure has accounted for about one-third of Singapore's total expenditure on health care while private expenditure has accounted for about two-thirds (Table 4 and Figure 6). However we have not been able to find information on the types of health care expenditure (primary care, hospital care, traditional Chinese medicine, etc.).

Figure 7 – Share of Public and Private Health Care Expenditure in Singapore, 1995



Source: Singapore Ministry of Health

Public Expenditure on Health Care

9.6 Public expenditure on health care in this paper refers to the sum of government funding allocated for provision of public health care services, administration of health insurance programmes, health education and construction of health care facilities etc.

9.7 Public expenditure on health care amounted to S$1,142 million in 1995 (Table 5). This represented 2.7 times over the expenditure level at S$414 in 1986. However, the change in public expenditure on health care was erratic. Public expenditure on health care recorded negative growth in 1989 and 1993. In four years of the period studied, public expenditure on health care grew by double digits. This may be due to the installation of new facilities, technology and construction of new health care facilities. However, the breakdown in types of public health care expenditure is not available.

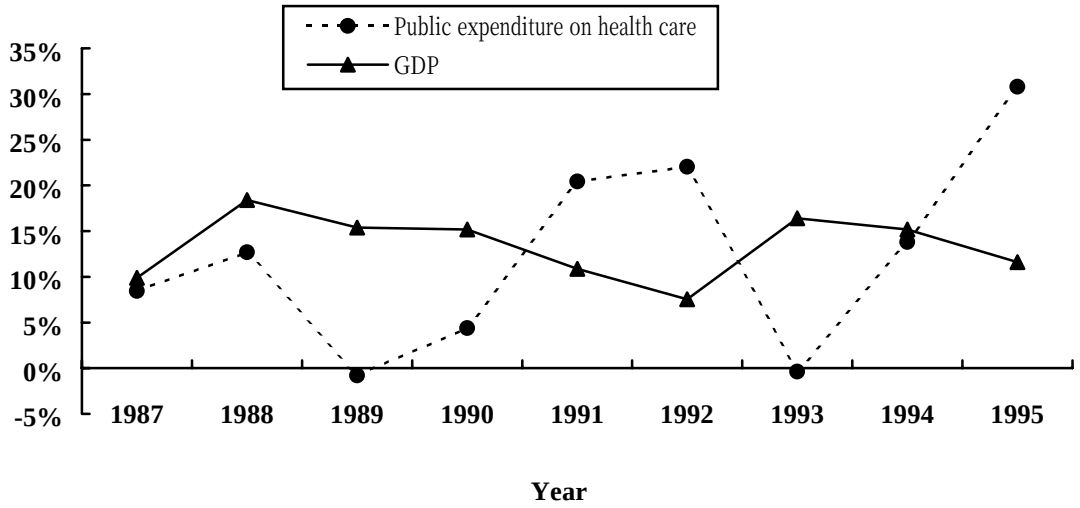
Table 5 - Public Expenditure on Health Care

Year	1960	1970	1980	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
S$m													
Public expenditure on health care (a)	33	81	223	414	449	506	502	524	631	770	767	873	1,142
Total health care expenditure (b)	85	203	635	1,312	1,412	1,645	1,747	2,050	2,314	2,687	2,816	3,132	3,545
GDP (c)	2,150	5,805	25,091	39,264	43,145	51,082	58,943	67,879	75,266	80,940	94,223	108,505	121,081
Growth rate (%)													
(a)	n.a.	n.a.	n.a.	n.a.	8.45	12.69	-0.79	4.38	20.42	22.03	-0.39	13.82	30.81
(b)	n.a.	n.a.	n.a.	n.a.	7.62	16.50	6.20	17.34	12.88	16.12	4.80	11.22	13.19
(c)	n.a.	n.a.	n.a.	n.a.	9.88	18.40	15.39	15.16	10.88	7.54	16.41	15.16	11.59
Distribution (%)													
(a)/(b)	38.82	39.90	35.12	31.55	31.80	30.76	28.73	25.56	27.27	28.66	27.24	27.87	32.21
(a)/(c)	1.53	1.40	0.89	1.05	1.04	0.99	0.85	0.77	0.84	0.95	0.81	0.80	0.94

Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

9.8 As a percentage of GDP, public expenditure on health care started to decrease in 1986 (Table 5 and Figure 8). It dropped from 1.05% in 1986 to below 1% since 1988. The growth of public health care expenditure outpaced economic growth in three years, 1991, 1992 and 1995.

Figure 8 – Trend Growth Rates of Public Health Care Expenditure and GDP, 1986 - 1995



Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

9.9 It is noted from Table 6 that the government spent less than 10% of its total expenditure on health care since 1970. In other words, the Singapore government has not allocated a lot of resources to health care.

Table 6 – Public Expenditure on Health Care and Total Government Expenditure

Year	**1960**	**1970**	**1980**	**1992**	**1993**	**1994**	**1995**
Public expenditure on health care (a) (S$m)	33	81	223	770	767	873	1,142
Total government expenditure (b) (S$m)	223	982	3,651	12,280	12,550	14,100	15,600
(a)/(b) (%)	14.80	8.25	6.11	6.27	6.11	6.19	7.32

Sources : Singapore Ministry of Health
Singapore 1998
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

Private Expenditure on Health Care

9.10 Private health care expenditure is the sum spent by individuals and organizations on health care services. Table 7 shows that private health care expenditure amounted to S$2,403 million in 1995. This has more than doubled the expenditure level at S$898 million in 1986.

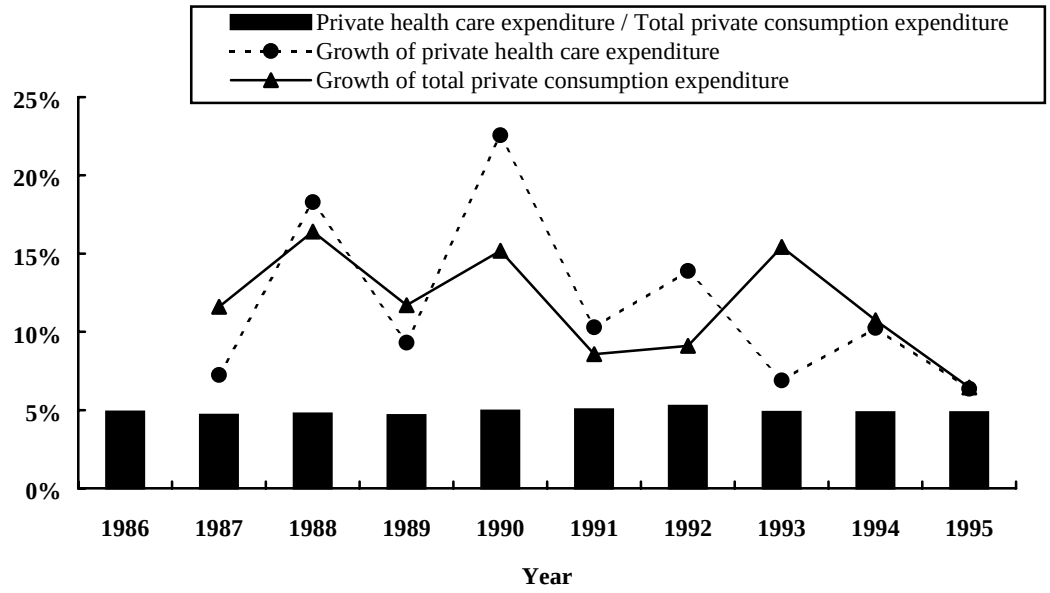
Table 7 - Private Health Care Expenditure

Year	**1960**	**1970**	**1980**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
S$m													
Private expenditure on health care (a)	52	122	412	898	963	1,139	1,245	1,526	1,683	1,917	2,049	2,259	2,403
Total private consumption expenditure (b)	1,922	3,920	12,911	18,405	20,541	23,911	26,710	30,762	33,398	36,436	42,056	46,571	49,577
Total health care expenditure (c)	85	203	635	1,312	1,412	1,645	1,747	2,050	2,314	2,687	2,816	3,132	3,545
GDP (d)	2,150	5,805	25,091	39,264	43,145	51,082	58,943	67,879	75,266	80,940	94,223	108,505	121,081
Distribution (%)													
(a)/(b)	2.71	3.11	3.19	4.88	4.69	4.76	4.66	4.96	5.04	5.26	4.87	4.85	4.85
(a)/(c)	61.18	60.10	64.88	68.45	68.20	69.24	71.27	74.44	72.73	71.34	72.76	72.13	67.79
(a)/(d)	2.42	2.10	1.64	2.29	2.23	2.23	2.11	2.25	2.24	2.37	2.17	2.08	1.98
Growth rate (%)													
(a)	n.a.	n.a.	n.a.	n.a.	7.24	18.28	9.31	22.57	10.29	13.90	6.89	10.25	6.37
(b)	n.a.	n.a.	n.a.	n.a.	11.60	16.41	11.71	15.17	8.57	9.10	15.42	10.74	6.45
(c)	n.a.	n.a.	n.a.	n.a.	7.62	16.50	6.20	17.34	12.88	16.12	4.80	11.22	13.19
(d)	n.a.	n.a.	n.a.	n.a.	9.88	18.40	15.39	15.16	10.88	7.54	16.41	15.16	11.59

Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

9.11 Table 7 shows that the proportion of private health care expenditure to GDP was around 2% during the period between 1986 to 1995. Table 7 and Figure 9 also show that health care expenditure accounted for an increasing share of the total private consumption expenditure since 1986 and reached 5.26% in 1992. This was probably due to the availability of Medisave; hence, some people were able to afford better hospital accommodation that they could not afford in the past. However, the breakdown of private expenditure into different types of health care services is not available.

Figure 9 – Trend Growth Rates of Private Health Care Expenditure and Total Private Consumption Expenditure, 1986 - 1995



Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

10. Health Care Financing

Total Health Care Financing

10.1 Table 8 shows the main sources of finance for health care in Singapore. Private financing by individuals and organizations accounted for around 70% of total health care financing between 1986 to 1995. The financial burden of health care was shifted increasingly towards the private sector since the 1980s and the private sector's reached a high of 74.4% in 1990. However, it started to decrease in 1991 and was below 70% in 1995.

10.2 It is noted in Table 8 that withdrawals from Medisave accounted for about 8% to 10% of total health care financing between 1986 to 1995.

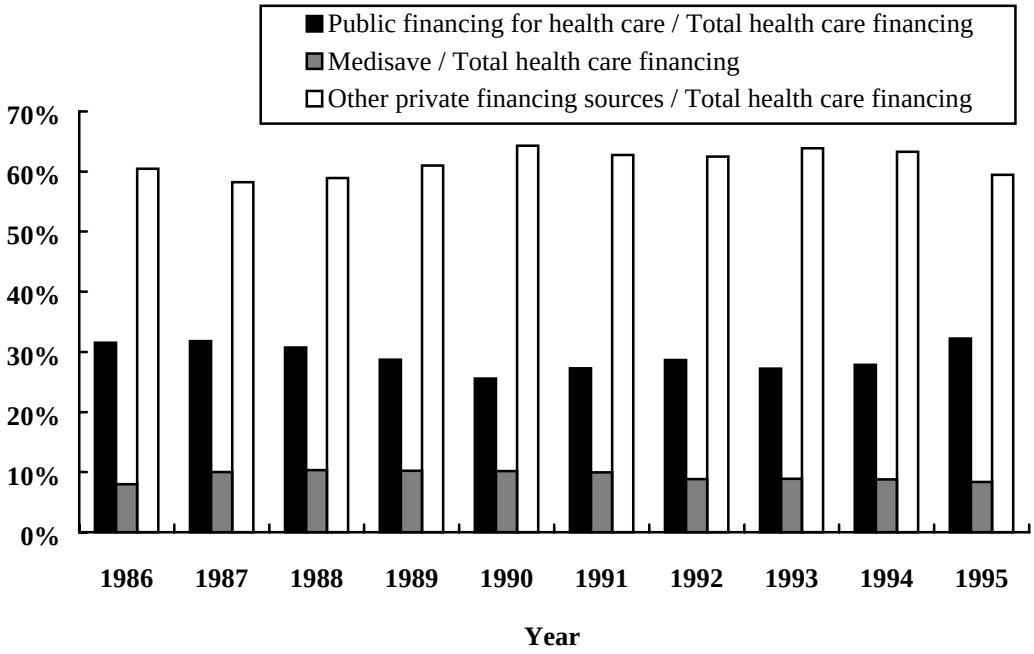
10.3 Government funding accounted for about one-third of total health care financing between 1986 and 1995 (Table 8 and Figure 10). For six of the 10 years during that period, government funding was below 30% of total health care financing.

Table 8 - Total Health Care Financing

Year	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
S$m										
Total health care financing (a)	1,312	1,412	1,645	1,747	2,050	2,314	2,687	2,816	3,132	3,545
Public financing for health care (b)	414	449	506	502	524	631	770	767	873	1,142
Private financing for health care (c)	898	963	1,139	1,245	1,526	1,683	1,917	2,049	2,259	2,403
Medisave (d)	*105*	*141*	*170*	*179*	*208*	*231*	*238*	*250*	*276*	*296*
Other private financing sources (e)	*793*	*822*	*969*	*1,066*	*1,318*	*1,452*	*1,679*	*1,799*	*1,983*	*2,107*
Distribution (%)										
(b)/(a)	31.55	31.80	30.76	28.73	25.56	27.27	28.66	27.24	27.87	32.21
(c)/(a)	68.45	68.20	69.24	71.27	74.44	72.73	71.34	72.76	72.13	67.79
(d)/(a)	*8.00*	*9.99*	*10.33*	*10.25*	*10.15*	*9.98*	*8.86*	*8.88*	*8.81*	*8.35*
(e)/(a)	*60.44*	*58.22*	*58.91*	*61.02*	*64.29*	*62.75*	*62.49*	*63.88*	*63.31*	*59.44*
Growth rate (%)										
(a)	n.a.	7.62	16.50	6.20	17.34	12.88	16.12	4.80	11.22	13.19
(b)	n.a.	8.45	12.69	-0.79	4.38	20.42	22.03	-0.39	13.82	30.81
(c)	n.a.	7.24	18.28	9.31	22.57	10.29	13.90	6.89	10.25	6.37
(d)	n.a.	34.29	20.57	5.29	16.20	11.06	3.03	5.04	10.40	7.25
(e)	n.a.	3.66	17.74	10.01	23.64	10.17	15.63	7.15	10.23	6.25

Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

Figure 10 – Share of Public and Private Sources in Financing Health Care



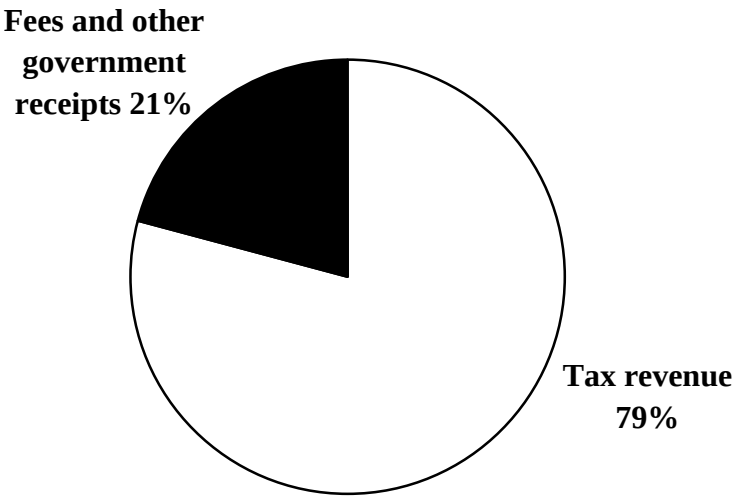
Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

Public Financing for Health Care

10.4 Public funding for financing health care comes mainly from government revenue. And nearly 80% of government revenue comes from tax revenue. In 1995, government revenue amounted to S$24.8 billion, among which S$19.6 billion was generated from various forms of taxes. The rest of the revenue comes from fees and charges and other government receipts.

10.5 In addition to government revenue, part of the public funding for health care services comes from interest of Medifund. Interest of Medifund at S$9.8 million accounted for less than 1% of public financing for health care in 1995.

Figure 11 – Sources of Public Financing for Health Care in 1995



N.B. Medifund is insignificant as a source of public financing for health care.
Source: Singapore 1995

Health Care Financing Arrangements in the Private Sector

10.6 Individuals and organizations finance health care with various sources including Medisave, Medishield, employer-provided insurance, privately-purchased insurance and their own money.

Table 9 - Private Financing for Health Care

Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
S$m										
Private health care financing (a)	898	963	1,139	1,245	1,526	1,683	1,917	2,049	2,259	2,403
Medisave (b)	105	141	170	179	208	231	238	250	276	296
Medishield (c)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.7	23.6
Medishield Plus (d)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.6	3.1
Other private financing sources (e)	793	822	969	1,066	1,318	1,452	1,679	1,799	1,966.7	2,080.3
Growth rate (%)										
(a)	n.a.	7.24	18.28	9.31	22.57	10.29	13.90	6.89	10.25	6.37
(b)	n.a.	34.29	20.57	5.29	16.20	11.06	3.03	5.04	10.40	7.25
(c)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	50.32
(d)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	416.67
(e)	n.a.	3.66	17.74	10.01	23.64	10.17	15.63	7.15	9.32	5.78
Distribution (%)										
(b)/(a)	11.69	14.64	14.93	14.38	13.63	13.73	12.42	12.20	12.22	12.32
(c)/(a)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.69	0.98
(d)/(a)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.03	0.13
(e)/(a)	88.31	85.36	85.07	85.62	86.37	86.27	87.58	87.80	87.06	86.57

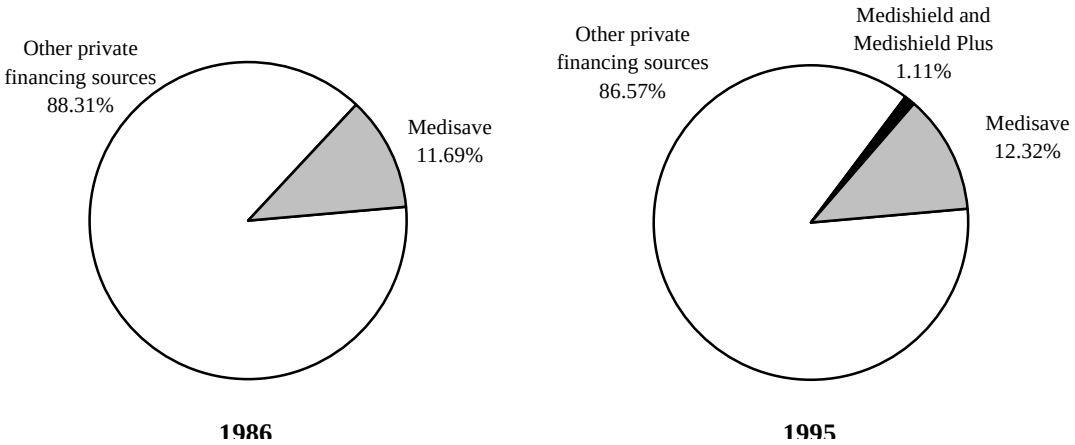
Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

Medisave and Medishield

10.7 Medisave covers about 85% of the population in Singapore. Table 9 and Figure 12 show that Medisave accounted for more than 10% of private financing for health care between 1986 and 1995. The share was higher during the late 1980s at more than 14% but decreased to around 12% in the 1990s.

10.8 Since 1990, Medisave account-holders can use their Medisave contribution to buy Medishield and Medishield Plus to finance the cost of treatment of catastrophic illness. However, Table 9 and Figure 12 show that Medishield and Medishield Plus was not a significant source of financing and accounted for less than 1% of private health care financing in 1994 and 1995.

Figure 12 – Sources of Private Financing for Health Care



Sources : Singapore Ministry of Health
Health Care Economics, Policies and Issues in Singapore by Toh Mun Heng and Linda Low

Other Private Financing Sources

10.9 Other private financing sources include medical insurance or medical benefits provided by the employers, privately purchased insurance and direct payment. Direct payment is the amount paid directly by patients at the point of consumption of health care services and the amount of cost-sharing expenses required by Medisave and other health insurance schemes. These sources together contributed more than 85% of private health care financing (Figure 12).

PART 5 - ANALYSIS

11. Analysis of the Health Care Financing Arrangements in Singapore

11.1 Singapore has a package of policies to keep the overall health care expenditure under control. One of the key policies enacted in the 1980s was to require the public to pay for their own health care instead of relying on the government to provide free health care services. In helping the public to pay for the health care costs, the government has developed various health care financing schemes (Medisave and Medishield) with contribution to CPF. The government has restricted its role to a provider of the last resort in providing free or heavily subsidized health care to the poor.

11.2 The Singapore government has also made it clear that it would not hesitate to intervene in various aspects of the delivery system, from physician supply to price setting and the establishment of service criteria. In the White Paper entitled "Affordable Health Care: A White Paper" published in 1993, the Singapore government said, "Market forces alone will not suffice to hold down medical costs to the minimum. The health care system is an example of market failure. The government has to intervene directly to structure and regulate the health system."

11.3 The White Paper pointed out that whichever way a country chooses to finance health care costs, the burden ultimately falls on the people: insurance premiums are ultimately paid by the people, employee medical benefits form part of the wage costs, and taxes are paid by taxpayers. The question is therefore not who pays, but what trade-off to make between competing goals such as equitable access, freedom of choice and affordability etc.

Financial Burden on Government

11.4 The Singapore government has shifted the financial burden of health care to the private sector since the 1980s. Throughout the years, it has been able to maintain its share of financing to around 30% of total health care financing. Less than 10% of the total government expenditure is spent on health care. The government is left with resources for other policy areas and for providing free or subsidized health care services to the poor.

Medisave

Advantages of Medisave

11.5 Medisave represents an additional source for individuals in financing their health care services. It does not require additional contribution from account-holders. About 6% to 8% of the contribution to CPF are allocated to Medisave since 1984. There is also no need to establish a separate structure for administering the scheme since Medisave is part of CPF.

11.6 Medisave places the responsibility on the individual and the family to save and utilize the funds for health care carefully. The cost-sharing measures such as deductibles and co-insurance discourage unnecessary consumption of health care services. Individuals and employers together finance about 60% of total health care expenditure while Medisave finances about 10% of the expenditure.

11.7 Medisave preserves the individual's freedom to choose their hospital and ward accommodation. The scheme makes it easier for many people to pay for their hospital bills including that for private and semi-private wards in public hospitals or that for private hospitals.

Disadvantages of Medisave

11.8 Medisave requires individuals to make decision on how to spend their savings on health care. However, the patient may not have adequate information about prices and medical outcomes and may not be able to evaluate the information he or she has received. There is a possibility that Medisave fund may have been misapplied.

11.9 In addition, Medisave may encourage people to spend more on health care than they can really afford. One study[2] found that of those who used their Medisave to pay for Class A admission, about 24% have monthly incomes only sufficient to pay for 40% of the bill.

Control of Expenditure

11.10 While Singapore's health care expenditure in some years (e.g. 1990, 1991, 1992 and 1995) grew faster than the economy, the proportion of GDP spent on health care has remained at around 3%. This is a very low level when compared to the OECD countries. The OECD's mean percentage was 10.4% in 1995. There is no problem of financial sustainability in the foreseeable future. In addition, the Singapore government is very conscious in keeping health care prices down by controlling the supply of health care services.

[2] Lim, Judy, *Health Care Reform in Singapore: The Medisave Scheme*, Prentice Hall, 1997

11.11 The present financing arrangements however may not be able to finance long-term nursing care for the elderly since Medisave and Medishield are mainly used for acute hospital care. There are cases where long-term care patients have depleted their accounts and those of their family. They have difficulties in affording the long-term care. By 2030, 18% of Singapore's population will be 65 years or older, up from 7% in 1997. This means that one elderly person will be supported by only three working adults, instead of one in 10 at the moment. The Singapore Ministry of Health is studying how to finance long-term care. One of the proposals is to establish a long-term care insurance scheme along the lines of the Medishield scheme.

12. Performance of Health Care System

Health Outcome

12.1 While Singapore's health care expenditure has remained at a low level, the health condition of Singaporeans has been improving since 1987 as shown in Table 10. People in Singapore have a longer life expectancy in 1996 than in 1987. Infant mortality rate has dropped significantly from 7.4 per 1 000 live births in 1987 to 3.8 per 1 000 live births in 1996. Crude death rate has been low at around 4.7 to 4.9 per 1 000 resident population.

Table 10 – Health Indicators of Singapore Residents

Year	Expectancy of life at birth (years)	Infant mortality rate (per 1 000 live births)	Crude death rate (per 1 000 resident population)
1987	74.6	7.4	4.7
1988	74.8	6.9	4.9
1989	75.0	6.6	4.9
1990	75.3	6.7	4.8
1991	75.6	5.5	4.7
1992	75.9	5.0	4.7
1993	76.2	4.7	4.6
1994	76.3	4.3	4.7
1995	76.4	4.0	4.8
1996	76.6	3.8	4.7

Source : Singapore Ministry of Health

Waiting Time

12.2 Patients in Singapore are able to receive their treatment within a short time (Table 11). The waiting time for consultation at specialist out-patient and general out-patient clinics is less than 30 minutes. The waiting time for elective surgery is eight days.

Table 11 – Median Waiting Time for Selected Public Health Care Services in 1996

Services	Waiting Time
Specialist out-patient clinic appointments	6 days
Consultation at specialist out-patient clinics	20 minutes
Elective surgical operations	8 days
Consultation at A&E departments	26 minutes
Consultation at polyclinics	21 minutes

Source : Singapore Ministry of Health

13. Health Care Expenditure and Financing and Health Outcome in Singapore and Hong Kong

13.1 Table 12 shows that Singapore has achieved a health outcome comparable to Hong Kong. Hong Kong people have a longer life expectancy than Singapore people do. But Singapore's infant mortality rate and crude death rate are both lower than those of Hong Kong. This is despite the fact that Singapore's health care expenditure is much lower than that of Hong Kong. Less than 3% of Singapore's GDP was spent on health care while Hong Kong spent nearly 5% of its GDP on health care.

Table 12 - Health Care Expenditure and Financing and Health Outcome in Singapore (1995) and Hong Kong (1996)

	Singapore (1995)	Hong Kong (1996)
Health Care Expenditure		
Total health care expenditure (HK$ million)	16,094	59,661
Per capita health care expenditure (HK$)	5,392	9,455
Total health care expenditure/GDP (%)	2.9	4.8
Public expenditure on health care/GDP (%)	*0.9*	*2.0*
Private health care expenditure/GDP (%)	*2.0*	*2.8*
Health Care Financing		
Total health care financing (HK$ million)	16,094	59,661
Public health care financing/total health care financing (%)	*32.2*	*42.0*
Private health care financing/total health care financing (%)	*67.8*	*58.0*
Health Outcome		
Life expectancy at birth (year) Male: Female	74.2 78.7	76.3 81.8
Infant mortality rate (per 1 000 live births)	4.0	4.1
Crude death rate (per 1 000 population)	4.7	5.1
Leading causes of death	1. Cancer 2. Heart diseases 3. Pneumonia 4. Cerebrovascular disease 5. Accidents	1. Malignant neoplasm 2. Heart diseases 3. Pneumonia 4. Cerebrovascular diseases 5. Injury and poisoning

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 S$:HK$ is 4.54:1

Sources : RP01/PLC
Hong Kong Annual Digest of Statistics 1997 Edition
Singapore Ministry of Health

14. Concluding Remarks

14.1 Singapore is able to achieve a good health outcome with a relatively low level of health care expenditure (e.g. 2.8% of GDP in 1997). One of the main factors for the achievement is the active role the government performs in regulating the supply and prices of health care services. The government also set a clear policy objective that no one but the poor would be entitled to free health care services. For those who can afford to pay for the health care services, the government expects them to pay a percentage of the cost for providing the services.

14.2 The Singapore government has also been able to put the major financial burden of health care on individuals and organizations. The government's share in health care financing has remained at around 30% of total health care financing. Individuals who bear the major share in financing health care would watch their consumption of health care services carefully to avoid incurring an expensive bill. The government has also introduced various measures to remind the public to keep themselves healthy and to avoid unnecessary utilization of health care services. One of the measures is to require the public to share the cost of health care services such as by paying deductibles and co-insurance etc.

14.3 By introducing the compulsory savings scheme, Medisave, in 1984, the government has provided an additional source of funding for individuals to pay for hospital care. The scheme has enabled the public hospitals to raise fees and charges to recover part of the cost without affecting the public's ability to pay.

14.4 Medisave has been built on CPF, which has a long history in administering and accumulating funds. This saves the trouble to establish a new organization for managing Medisave. This advantage however may be not present in other places such as Hong Kong.

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