Synopsis of Healthcare Financing Studies

Hong Kong's Domestic Health Accounts

Introduction

Hong Kong's Domestic Health Accounts (DHA) is a set of descriptive account that traces all the financial resources that flow through Hong Kong's health system over time. It is compiled in accordance with the International Classification for Health Accounts (ICHA) Framework developed by Organisation for Economic Co-operation and Development (OECD) to describe systematically the totality of health expenditure flows in both government and non-government sectors. The framework for DHA has been drawn up based on OECD guidelines with input from a wide spectrum of local stakeholders and potential users of DHA. The estimates of DHA are compiled from many sources of information, including financial accounts of all relevant stakeholders and estimates from surveys. Using the DHA framework to account for health expenditures has the advantage of allowing comparison with other advanced economies which have also compiled their own National Health Accounts (NHA) using the same framework. The Food and Health Bureau has commissioned the Department of Community Medicine and School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong to update DHA to the reference year 2004/05.

Definition of Health Expenditures

2. Under DHA, health expenditures consist of all expenditures or outlays for medical care, disease prevention, health promotion, rehabilitation, long-term care, community health activities, health administration and regulation, and capital formation with the predominant objective of improving health. In the framework, health expenditures are classified according to three key dimensions of analysis: (i) health financing sources, (ii) health service providers, and (iii) health functions.

Financing sources

3. The financing classification provides a breakdown of health expenditure into public and private units of incurring expenditure on health. Financing sources are grouped into two mutually exclusive institutional sectors: (i) public and (ii) private sectors. These are further disaggregated as follows:-

(a) Public sector
- General government
- Social security funds

(b) Private sector
- Private household out-of-pocket expenditure
- Private insurance
- Employer-provided group medical benefits
- Non-profit institutions serving households
- Corporations (other than health insurance)
- Non-patient care related revenue
- Provider own funds

Service providers

4. The classification of health service providers are as follows:-

(a) Hospitals
- General hospitals
- Mental health and substance abuse hospitals
- Specialty (other than mental health and substance abuse) hospitals

(b) Nursing and residential care facilities
- Nursing care facilities
- Residential mental retardation, mental health and substance abuse facilities
- Community care facilities for the elderly (eg. day care centres for the elderly)
- All other residential care facilities

(c) Providers of ambulatory healthcare
- Offices of medical practitioners (general practitioners and specialists, and inclusive of both western medicine and Chinese medicine practitioners)
- Offices of dentists
- Offices of allied and other health professionals
- Other out-patient facilities (e.g. family planning centres, dialysis centres)
- Laboratories and diagnostic imaging facilities
- Providers of home healthcare services
- Other providers of ambulatory healthcare (e.g. ambulance services, blood and organ banks)

(d) Retail sale and other providers of medical goods
- Pharmacies
- Retail sale and other suppliers of optical and other vision products
- Retail sale and other suppliers of hearing aids
- Retail sale and other suppliers of medical appliances (other than optical goods and hearing aids)
- All other miscellaneous sale and other suppliers of pharmaceutical and medical goods

(e) Provision and administration of public health programmes

(f) General health administration and insurance
- Public sector administration of health
- Social security funds
- Employer-provided group medical benefits administration
- Private insurance
- All other providers of health administration

(g) Other industries
- Establishments as providers of occupational healthcare services
- Private households as providers of home care
- All other industries as secondary producers of healthcare

Where relevant and practical, service providers are further classified into three broad categories, (i) public sector (e.g. government and statutory bodies), (ii) private

sector, and (iii) non-government organizations.

Health functions

5. The following is the classification of core health functions and health-related functions:-

(a) Services of curative care
- In-patient curative care
- Day patient hospital services
- Ambulatory services (including general out-patient, specialist out-patient, dental, Accident & Emergency, and allied health services)
- Home care

(b) Rehabilitative and extended care
- In-patient rehabilitative care
- Day cases of rehabilitative care
- Out-patient rehabilitative care
- Services of rehabilitative home care

(c) Long-term care
- In-patient and institutional long-term care
- Day cases of long-term nursing care
- Long-term nursing care: home care

(d) Ancillary services to healthcare
- Laboratory services
- Diagnostic imaging services
- Patient transport and emergency rescue
- All other ancillary services

(e) Medical goods outside the patient care setting
- Pharmaceuticals and other medical consumables
- Therapeutic appliances and other medical durables (e.g. glasses, hearing aids, wheelchair, prosthetics)

(f) Prevention and public health services
- Maternal and child health, family planning and counseling

- School health services
- Prevention of communicable diseases
- Prevention of non-communicable diseases
- Occupational healthcare
- All other miscellaneous public health services

(g) Health programme administration and health insurance
- General public sector administration of health
- Private insurance and employer-provided group medical benefits administration

(h) Health-related functions
- Investment in medical facilities

6. Other health-related functions include education and training of health personnel, research and development in health, food hygiene and drinking water control, and environmental health. However, they are not included in the computation of the total health expenditures.

7. Health expenditures are defined in the DHA framework on the basis of their primary or predominant purpose of improving health, regardless of the primary function or activity of the entity providing or paying for the associated health services. For example, if the Architectural Services Department (ASD) has contributed to the building of medical and health facilities, its expenditure related to these projects will be included in the public health expenditure under the DHA framework. This is in contrast to the definition of health expenditure under the Government's General Revenue Account (GRA), which confines public health expenditures to those incurred by government departments with primarily health-related function.

Comparison with Government's General Revenue Account (GRA)

8. Under GRA, only direct expenditure by the Food and Health Bureau (FHB) and the Department of Health (DH) (including FHB's allocation to the HA), and those expenditure directly related to health by departments such as the Government Laboratory are counted as government expenditure under the health policy area. Whereas under the DHA framework, apart from those already classified as health expenditure under the GRA, public health expenditures also cover other health-related functions performed by additional government departments. For example, the DHA includes health expenditure on nursing homes, rehabilitation and medical social services under the Social Welfare Department, and ambulance service under the Fire Services Department, Auxiliary Medical Service, etc. These are not included in the government expenditure under the health policy area in the GRA[1].

9. In other words, DHA is more comprehensive and detailed than the GRA in the documentation of public health expenditure. In fact, the DHA estimates on public health expenditure have been consistently higher than the GRA estimates by about 15% of the GRA estimates in recent five years. Table 1 is a comparison of the estimated public health expenditures under DHA and GRA.

Table 1. Estimates of Public Health Expenditure using DHA and GRA, 2000/01-2004/05

	2000/01	2001/02	2002/03	2003/04	2004/05
DHA (HK$ Million) (a)	37,102	39,239	38,613	40,025	37,179
GRA (HK$ Million) (b)	32,720	34,182	33,169	34,201	32,199
Difference [(a – b) / (b)]	13.4%	14.8%	16.4%	17.0%	15.5%

Source of GRA: Financial Services and Treasury Bureau, Government Secretariat

1 Examples of other DHA inclusions are: pest and vector control under the Food and Environmental Hygiene Department; occupational health activities under the Labour Department; and medical air transport services under the Government Flying Service.

Public and Private Health Expenditures

10. DHA data from 1989/90 to 2004/05 shows that Hong Kong's total health expenditure was HK$67,807 million in fiscal year 2004/05, with HK$37,179 being public or government expenditure and HK$30,628 being private expenditure. Per capita health expenditure was HK$9,996 in 2004/05. The total health expenditure constituted 5.2% of GDP, which was a significant increase from the 3.5% in 1989/90 (Figures 1 and 2). During the period 1989/90 to 2004/05, total health expenditure increased by over 2.5 times at an average annual growth rate of 8.7%. In real terms (in 2000 prices), the expenditure was growing at an average annual rate of 7%, which was much higher than the GDP growth of 4% (Figure 3).

11. The increase in total health expenditure was largely driven by the growth in public health expenditure, which has increased by 3.8 times at an average annual growth rate of 11.0% during the period 1989/90 to 2004/05. In real terms (in 2000 prices), public health expenditure rose 2.8 times over the period, compared with 1.1 times for private health expenditure. The share of public health expenditure increased from 40.1% to 54.8% during the same period (Figure 4), and its share of GDP doubled from 1.4% to 2.8% (Figure 2). Correspondingly, private share of the health expenditure has decreased from 59.9% to 45.2%. In terms of public expenditure per se, DHA data shows that the public health expenditure constituted 14.5% of the total public expenditure in 2004/05.

Figure 1. Total Health Expenditure and GDP, 1989/90 – 2004/05

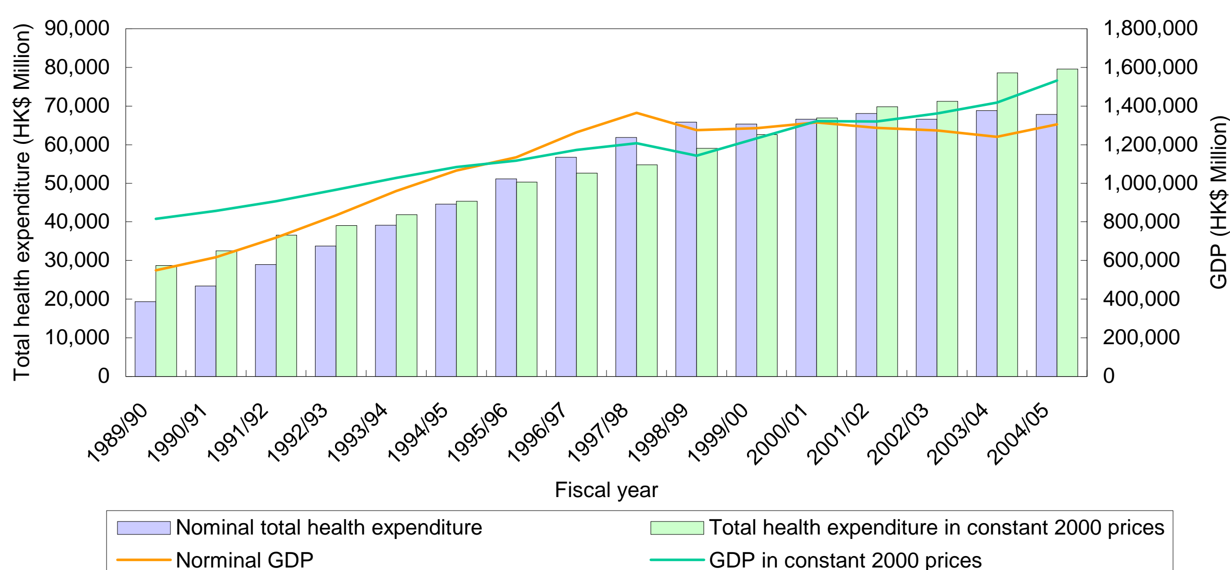
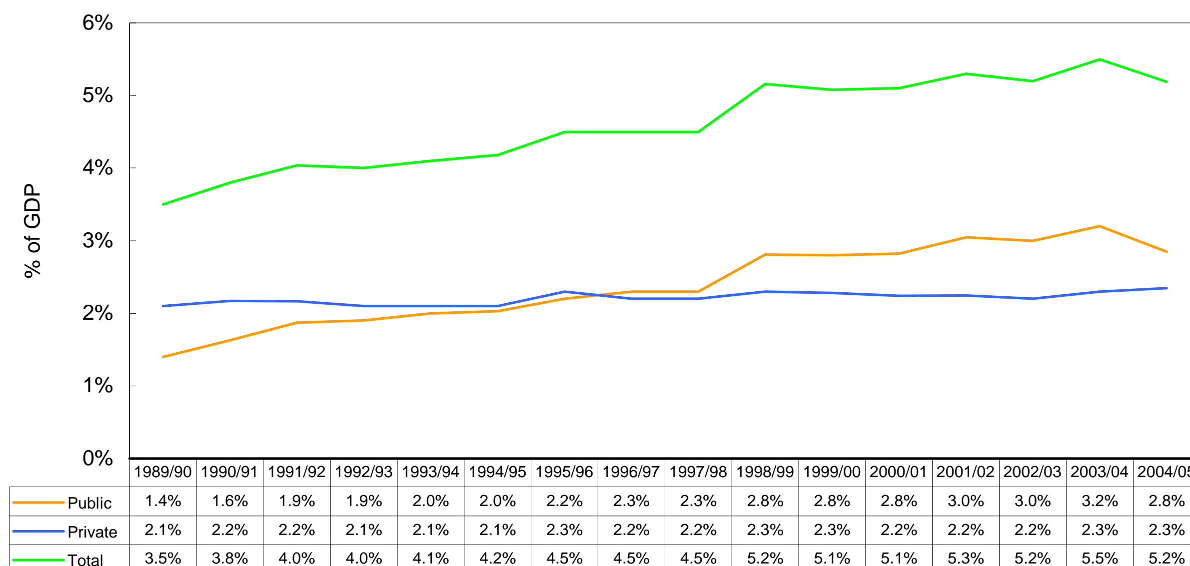


Figure 2. Public and Private Health Expenditure as a Percentage of GDP, 1989/90 – 2004/05



	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Public	1.4%	1.6%	1.9%	1.9%	2.0%	2.0%	2.2%	2.3%	2.3%	2.8%	2.8%	2.8%	3.0%	3.0%	3.2%	2.8%
Private	2.1%	2.2%	2.2%	2.1%	2.1%	2.1%	2.3%	2.2%	2.2%	2.3%	2.3%	2.2%	2.2%	2.2%	2.3%	2.3%
Total	3.5%	3.8%	4.0%	4.0%	4.1%	4.2%	4.5%	4.5%	4.5%	5.2%	5.1%	5.1%	5.3%	5.2%	5.5%	5.2%

Figure 3. Annual Growth Rate of GDP, Public and Private Health Expenditure and Total Health Expenditure (in 2000 prices)

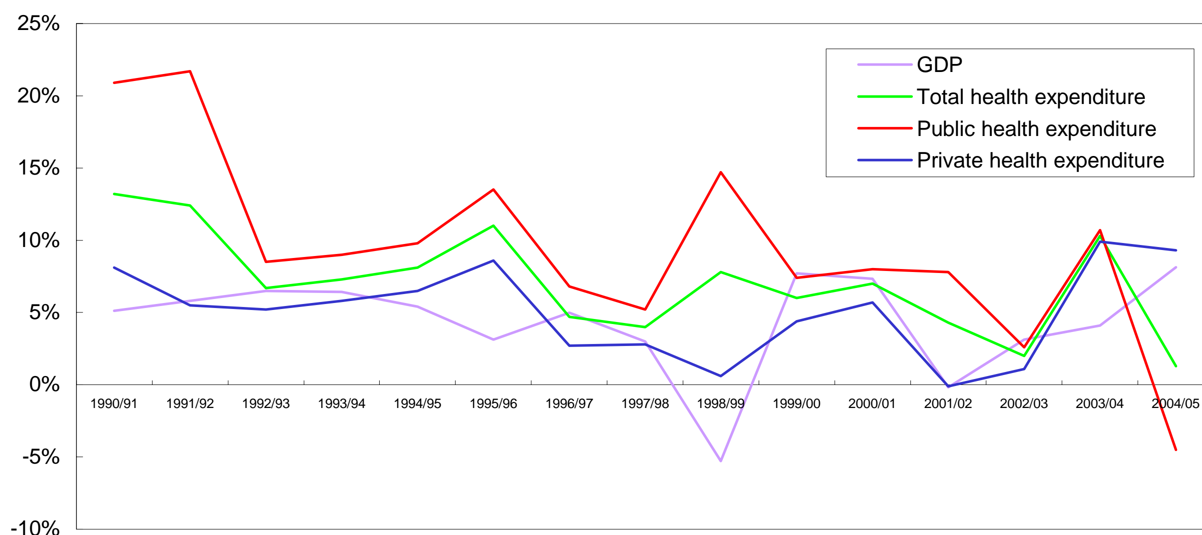
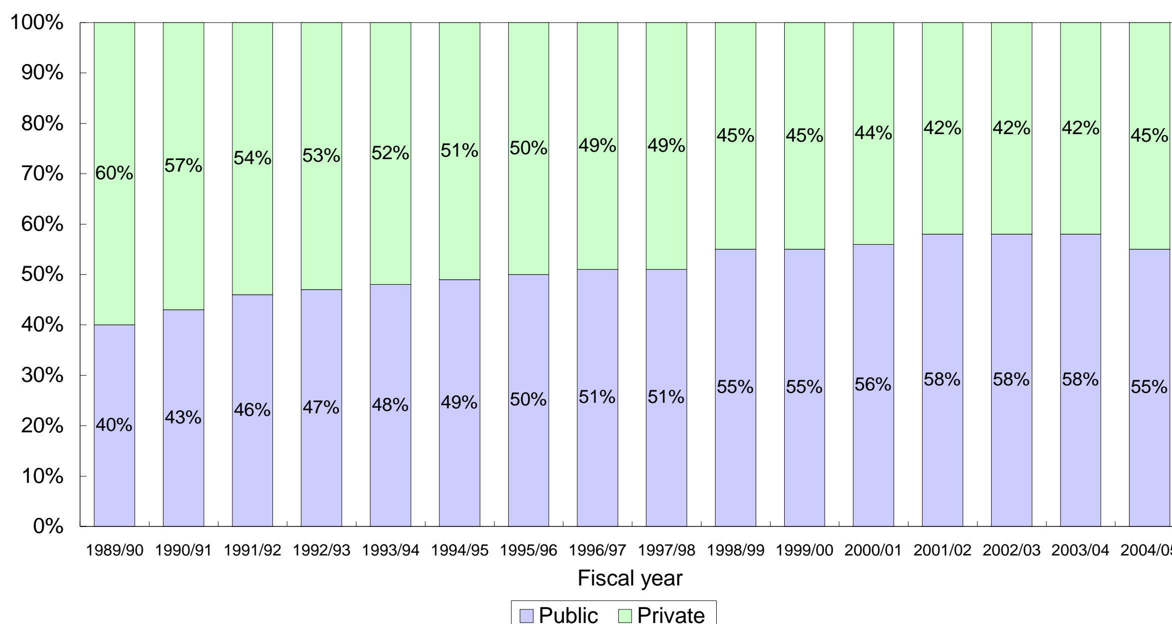


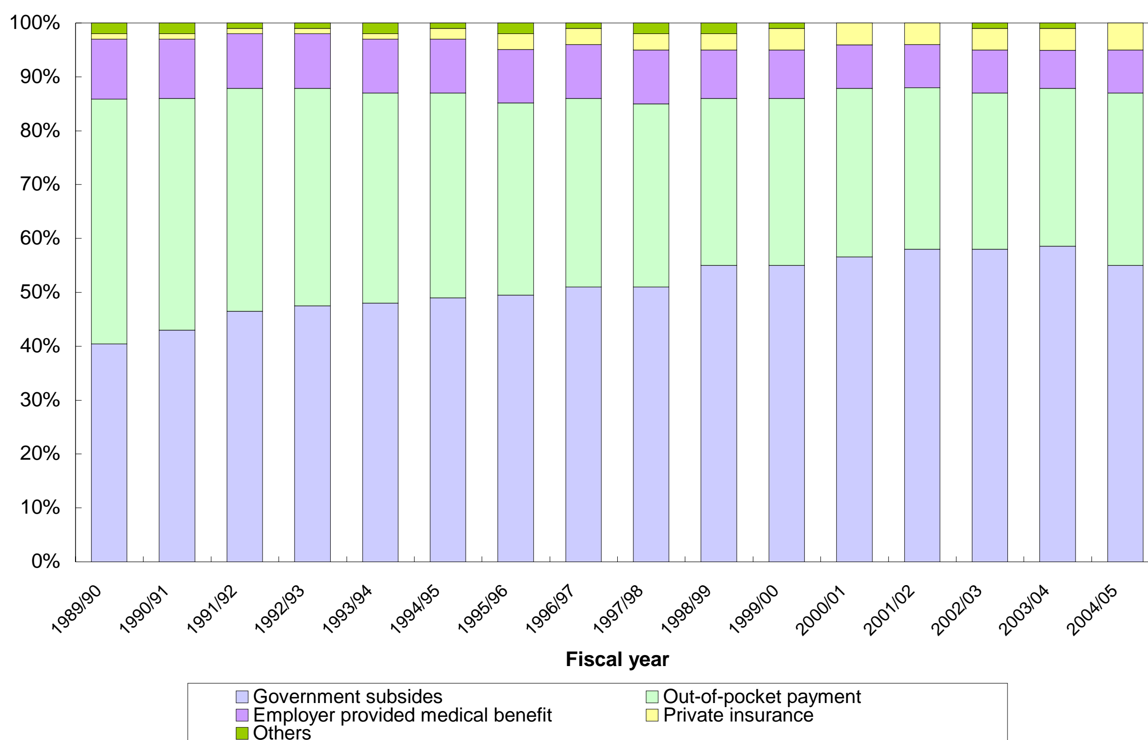
Figure 4. Public and Private Share of Total Health Expenditure, 1989/90 – 2004/05



Financing Source

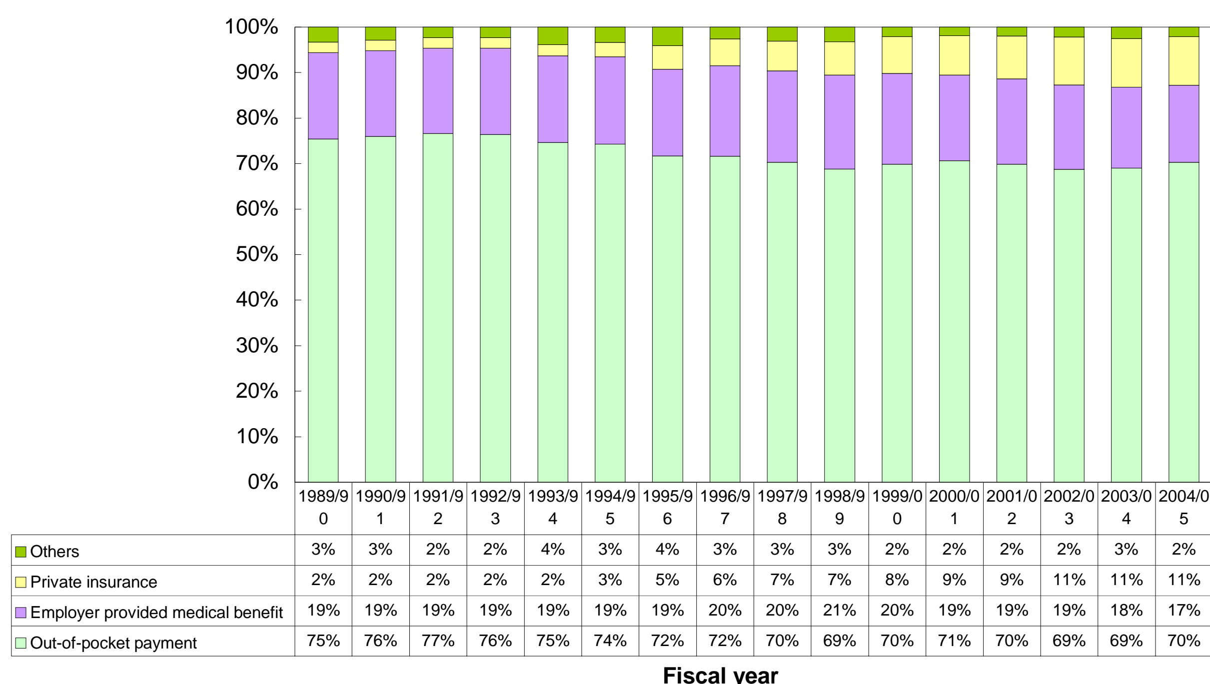
12. Figure 5 shows the mix of total health expenditure between 1989/90 and 2004/05. At 55%, government funding was the major source of health financing in 2004/05 while household out-of-pocket expenditure constituted the second largest share of health expenditure (32%) although it has decreased from 45% in 1989/90. The remaining sources were employer-provided group medical benefits (8%), private insurance (5%) and other sources of financing (1%), all of which are private funding. The DHA data also indicates that the revenue from patient fees and charges has constituted only around 5% of the expenditure of public health care providers, which means that the subsidization level of public health care services is at some 95%.

<u>Figure 5. Total Health Expenditure by Financing Sources, 1989/90 – 2004/05</u>



13. Out-of-pocket payments by households accounted for about 70% of private funding whereas employers and insurance accounted for another 28% in 2004/05 (Figure 6), with 17% being employer-provided medical benefits and 11% being individual medical insurance (private insurance). Employers and insurance have taken on an increasing role of private funding, their share of private funding having increased from 21% in 1989/90.

Figure 6. Private Health Expenditure by Financing Sources, 1989/90 – 2004/05

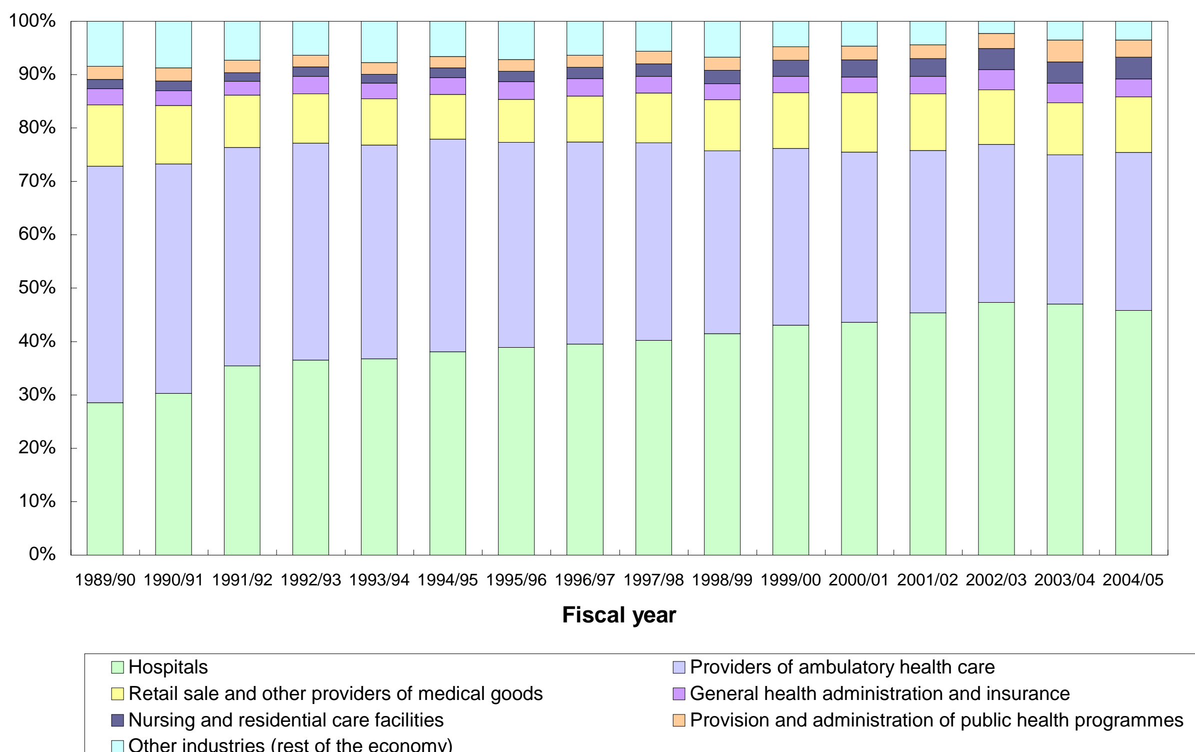


	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Others	3%	3%	2%	2%	4%	3%	4%	3%	3%	3%	2%	2%	2%	2%	3%	2%
Private insurance	2%	2%	2%	2%	2%	3%	5%	6%	7%	7%	8%	9%	9%	11%	11%	11%
Employer provided medical benefit	19%	19%	19%	19%	19%	19%	19%	20%	20%	21%	20%	19%	19%	19%	18%	17%
Out-of-pocket payment	75%	76%	77%	76%	75%	74%	72%	72%	70%	69%	70%	71%	70%	69%	69%	70%

Service Providers

14. Public and private health expenditure incurred at providers of ambulatory services and hospitals made up about 76% of total health expenditure throughout the period. However, the share of hospital expenditure increased from 29% of total spending in 1989/90 to 46% in 2004/05, whilst the share of providers of ambulatory services shrank from 44% to 30% (Figure 7). As mentioned in Paragraph 4 (c), providers of ambulatory services include general practitioner (GP) and specialist clinics, clinics of Chinese Medicine practitioners, dental clinics, dialysis care centres, family planning centres, laboratories and diagnostic imaging facilities, providers of home healthcare and ambulance services.

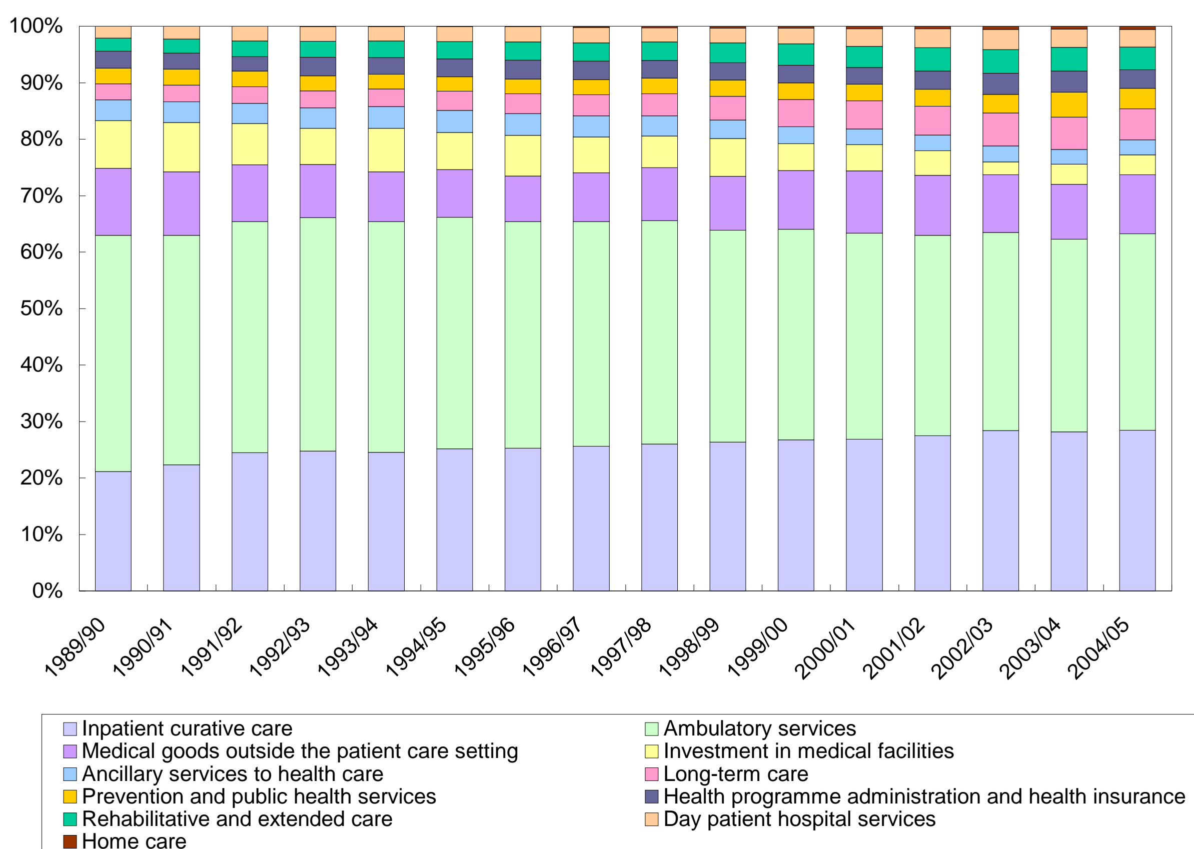
Figure 7. Total Health Expenditure by Service Providers, 1989/90 – 2004/05



Health Functions

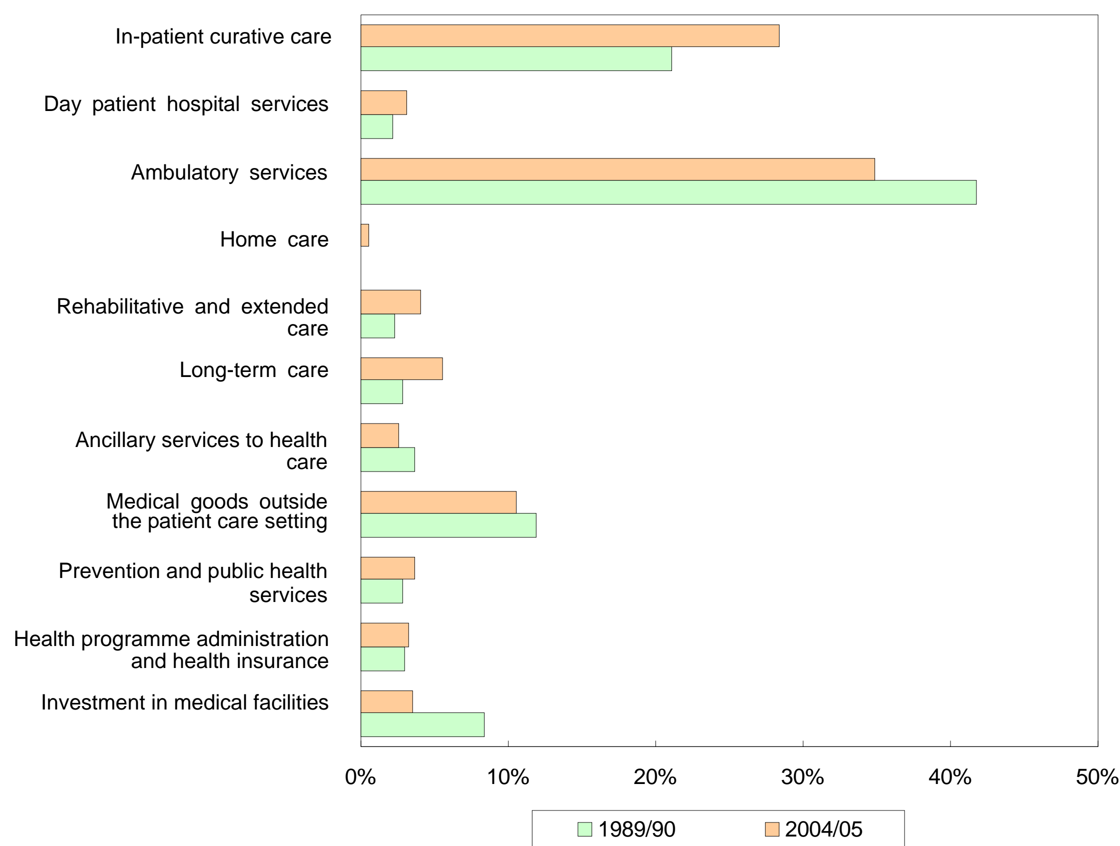
15. In 2004/05, services of curative care accounted for the largest share of total health expenditure (67%) which were made up of ambulatory service (35%), in-patient curative care (28%), day patient hospital service (3%) and home care (1%) (Figure 8). The next largest share of total health expenditure was spent on medical goods outside the patient care setting (10%). The remaining health functions, which also include prevention and public health service, long-term care, ancillary services to healthcare, investment in medical facilities, etc., each constituted around 3% to 6% of total health expenditure.

Figure 8. Total Health Expenditure by Functions, 1989/90 – 2004/05



16. Figure 9 compares the health functions as a share of total health expenditure in 1989/90 with those of 2004/05. Between the period, the share of expenditure on in-patient curative care increased by 7 percentage points, while those of ambulatory services and investment in medical facilities decreased by 7 and 4 percentage points respectively. Related to increasing demand as a result of population ageing, the expenditure shares on long-term care doubled during the period, from 3% in 1989/90 to 6% in 2004/05.

Figure 9. Comparison of Total Health Expenditure by Functions in 1989/90 and 2004/05

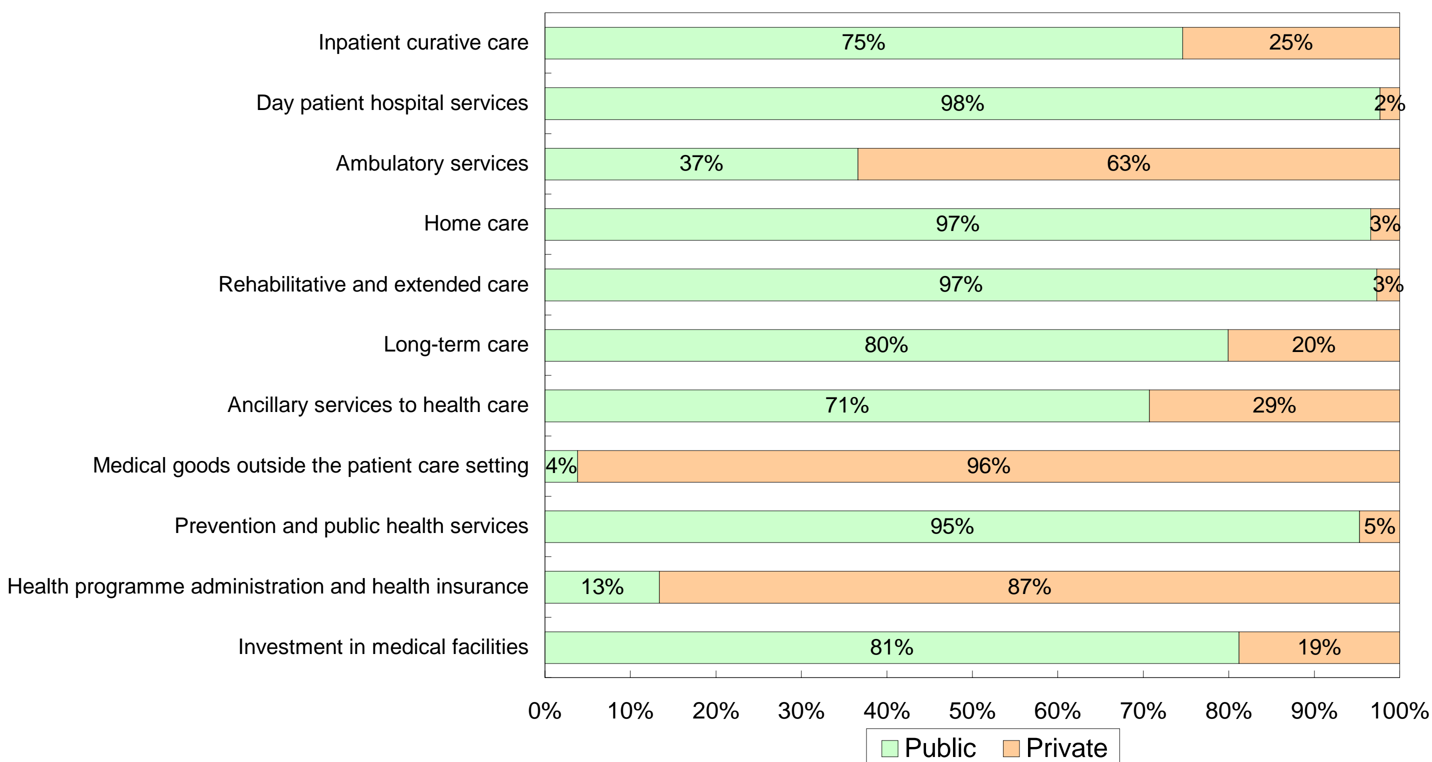


17. Figure 10 illustrates the share of public and private health expenditure in the financing of various health functions in 2004/05. In-patient curative care was predominantly financed by public funding (75%) whereas ambulatory services were largely financed by private funding (63%). At least 97% of the expenditures on day patient hospital services, home care, rehabilitative and extended care, and prevention and public health services were publicly funded. In contrast, 96% of the expenditures on medical goods outside the patient care setting (such as over-the-counter medication and prosthetics) were from private funding. Table 2 shows a detailed breakdown of the total health expenditures by functions and financing sources in 1989/90 and 2004/05.

18. Although ambulatory services included both general and specialist ambulatory care, the respective share of their expenditures are not presented here because it has been difficult to differentiate the two in the private sector. Nevertheless, anecdotal evidence indicates that general out-patient care is the major ambulatory services provided by the private sector. On the other hand, public healthcare data shows that most of the public funding on ambulatory services is for

specialist out-patient care.

Figure 10. Public and Private Health Expenditure by Function, 2004/05



Food and Health Bureau
Hong Kong Special Administrative Region Government
March 2008

Table 2. Total Health Expenditure by Function and Financing Source, 1989/90 and 2004/05

HK$ Million	1989/90						2004/05					
	Government Subsidies	Employer provided medical benefit	Private Insurance	Out of pocket payment	Others	Total	Government Subsidies	Employer provided medical benefit	Private Insurance	Out of pocket payment	Others	Total
Services of curative care	4,621 (23.9%)	1,880 (9.7%)	80 (0.4%)	6,007 (31.0%)	14 (0.1%)	12,602 (65.1%)	25,434 (37.5%)	4,452 (6.6%)	1,786 (2.6%)	13,657 (20.1%)	48 (0.1%)	45,377 (66.9%)
In-patient curative care	2,866 (14.8%)	648 (3.3%)	38 (0.2%)	536 (2.8%)	8 (0.0%)	4,095 (21.1%)	14,370 (21.2%)	1,992 (2.9%)	1,021 (1.5%)	1,874 (2.8%)	14 (0.0%)	19,271 (28.4%)
Day patient hospital services	400 (2.1%)	-	-	10 (0.1%)	2 (0.0%)	411 (2.1%)	2,062 (3.0%)	-	-	46 (0.1%)	3 (0.0%)	2,111 (3.1%)
Ambulatory services	1,355 (7.0%)	1,233 (6.4%)	42 (0.2%)	5,461 (28.2%)	5 (0.0%)	8,095 (41.8%)	8,635 (12.7%)	2,460 (3.6%)	766 (1.1%)	11,724 (17.3%)	30 (0.0%)	23,615 (34.8%)
Home care	-	-	-	-	-	-	367 (0.5%)	-	-	13 (0.0%)	-	380 (0.6%)
Rehabilitative and extended care	424 (2.2%)	-	-	21 (0.1%)	-	445 (2.3%)	2,655 (3.9%)	-	-	70 (0.1%)	4 (0.0%)	2,729 (4.0%)
Long-term care	407 (2.1%)	-	-	139 (0.7%)	2 (0.0%)	548 (2.8%)	3,002 (4.4%)	-	-	741 (1.1%)	13 (0.0%)	3,756 (5.5%)
Ancillary services to healthcare	353 (1.8%)	101 (0.5%)	4 (0.0%)	247 (1.3%)	0 (0.0%)	706 (3.6%)	1,266 (1.9%)	230 (0.3%)	89 (0.1%)	201 (0.3%)	3 (0.0%)	1,789 (2.6%)
Medical goods outside the patient care setting	-	-	-	2,307 (11.9%)	-	2,307 (11.9%)	272 (0.4%)	-	-	6,736 (9.9%)	97 (0.1%)	7,105 (10.5%)
Prevention and public health services	510 (2.6%)	-	-	24 (0.1%)	7 (0.0%)	540 (2.8%)	2,320 (3.4%)	-	-	103 (0.2%)	12 (0.0%)	2,435 (3.6%)
Health programme administration and health insurance	177 (0.9%)	221 (1.1%)	179 (0.9%)	3 (0.0%)	2 (0.0%)	582 (3.0%)	299 (0.4%)	486 (0.7%)	1,409 (2.1%)	36 (0.1%)	8 (0.0%)	2,238 (3.3%)
Investment in medical facilities	1,274 (6.6%)	-	-	0 (0.0%)	362 (1.9%)	1,636 (8.4%)	1,932 (2.8%)	-	-	0 (0.0%)	446 (0.7%)	2,378 (3.5%)
Total	7,766 (40.1%)	2,202 (11.4%)	263 (1.4%)	8,748 (45.2%)	387 (2.0%)	19,366 (100.0%)	37,179 (54.8%)	5,168 (7.6%)	3,284 (4.8%)	21,545 (31.8%)	631 (0.9%)	67,807 (100.0%)