

# **Assessing Government Health Expenditure in China**

Final draft, October 2005

This paper was prepared by the China National Health Economics Institute as a background paper for the World Bank China Rural Health Study (the work was led by Ms. Zhao Yuxin). The findings, interpretations and conclusions expressed in this paper are entirely those of the authors, and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

## **Budget Management Scheme and Subsidy Mode of Government Health expenditure**

Government health expenditure is the fiscal budget appropriation for health from governments at each level. Based on the economic purpose, it can be classified into 2 categories: subsidy for provider and subsidy for consumer. Government subsidy for provider includes recurrent expenses on health, recurrent expenses on traditional medicine, recurrent expenses on family planning, expenses for food and drug administration, intra-budget capital investment, expenses for medical research and expenses for health administration; the subsidy for consumer mainly includes government appropriation for Government Medical Insurance Scheme (GIS), Basic Medical Insurance System (BMIS), New Cooperative Medical System (NCMS) and Medical Assistance Scheme (MAS).

### **Subsidy for provider**

In the planned economy period, the government executed highly centralized fiscal management scheme, and the budget preparation method applied was “monopoly control over the income and expenditure”. Following this method, all the income of health institutes was delivered to the government and the expenditure of health institutes was subsidized by government budget. Based on the economic characteristic of health institutes, government health subsidy had two kinds of modes: “whole–budget management” and “balance budget management”. “whole-budget management” was applied to the health institutes without steady business income, such as centers for disease control, whose entire expenditure was subsidized by government budget and all the income was delivered to the government. “Balance budget management” was applied to the health institutes that have regular income but can not compensate their expenditure, such as city hospitals, township health centers. The balance of income and expenditure was compensated by government appropriation. The balance budget management had different modes, such as “gross amount management, balance subsidy” which subsidized the health institutes by the

balance of income and expenditure, “gross amount management, specialized item subsidy” which subsidized the institutes for one or some items, and “gross amount management, quota subsidy” which subsidized health institutes according to the subsidy quota.

In the beginning of 1980's, the fiscal system reformed and developed a fiscal system with “division of revenue and expenditure between the central and local governments and with contracts at different levels”. The reform clarified the division of revenue and expenditure between central and local government, which enlarged the economic right and duty of local government. With the reform, health input became the duty of local government. The recurrent expenses on health were provided by the local government. Meanwhile, the central government provided some transfer payment to local government health input. In order to give full scope to the initiative of health institutes, the governments reformed the budget management method since 1979, which called “budget contract” management method. Following this method, the “whole-budget management” institutes applied “budget contract, surplus retain” principle, the government contracted the budget appropriation (assessed and ratified by government) with the health institutes and the annual surplus was retained by institutes. The method applied by the institutes with “balance budget management” method was to ratify and contract the subsidy by checking income and expenditure, the surplus was retained by the health institutes.

To alleviate the influence of lack of government budgetary input and give the full scope to the initiative of health institutes, the government permitted the public health institutes such as Disease control, Maternal and child health institutes charged from some services items to increase their business income.

In 2000, the government began to administrate institutes by their categories. The health institutes were categorized into non-profit institutes and for-profit institutes. For non-profit health institutes, they followed the “check the income and expenditure,

quota or specialized item subsidy, no reimbursement for overspend, surplus retain” method, meanwhile, the government regulated the scope, content and mode of government health subsidy. The scope of government health subsidy included the expenses for health administration and supervision agencies, public health institutes such as disease control and maternal and child health facilities and the Medical facilities held by government.

#### 1. Health administration and supervision agencies

The expenses for performing health administration and supervision function of Health administration and supervision agencies at each level are appropriated by the fiscal department at the same level. Among which, the staff expenses are appropriated by the fiscal department according to the actual number of authorized staff, wages and subsidy standard ratified by government; the business expenditure apply quota subsidy; the special business expense such as health supervision are solved according to the need of work.

#### 2. Public health institutes such as disease control and maternal and child health facilities

The expenses needed for public health institutes, such as disease control and maternal and child health facilities, to provide public health services are arranged by fiscal department at the same level and extra-budget income of institutes. The subsidy level is based on the quota standard and the work born by public health institutes.

#### 3. Medical facilities hold by government

The county or above non- profit hospitals hold by government mainly apply specialized item subsidy, which are born by fiscal department of the same level. The items including the launch expenditure and expenditure for hospital development and construction, expenses for retirees before the establishment of Basic Pension Insurance of Institute Employees, medical science research of key clinic issues, and the subsidy for deficit of basic medical services permitted by policy.

The community health facilities applied quota subsidy appropriated by the fiscal

department of the same level. The standard is set according to the preventive services of community population and basic medical services task born by community health facilities.

At present, the government usually adopt “quota subsidy” for the health institutes. The government ratifies a fixed amount subsidy according to the subsidy level in the last few years. The subsidy is principally used for expenses for retirees and employees, The specialized Item subsidy is mainly used on some expenditure items such as equipment purchase and capital investment.

Under the fiscal decentralization mechanism, health input is the duty of local government. Governments at different levels (central, provincial, city, county, township) are in charge of health input at the same level. For the unbalanced economy development in different area, some health administrative organizations are lack of fiscal capacity to support the health institutes at the grass-roots level, which caused the limitation of health appropriation increase. Furthermore, the central government began to implement the policy called “Surrender part of the rights and profits” in the beginning of social-economic reform. The fiscal capacity of central government has decreased and the transfer payment to local government is reducing, which caused the lag of health development in the rural and some poor area. The transfer payment from provincial government to the government at lower level usually applies specialized item appropriation mode. However, the item appropriation is lack of continuity because there’s no regular transfer payment scheme for the poor area. At present, the input for the health institutes at township level has become the responsibility of county finance.

### **Subsidy for Consumer**

The subsidy for consumer includes Government Insurance Scheme, Urban Basic

Medical Insurance System, New Cooperative Medical Scheme and Medical Assistance Scheme.

Government Insurance Scheme is a medical insurance scheme for the workers in government organs and institutes and the students in colleges and universities. Before 1978, GIS fund applied “unified revenue and expenditure” method. Since economic reform, the government finance ratified the budget quota for GIS based on actual demand of works, fiscal capacity and status of health resources. The budget quota for GIS is managed by local government and the excess fund is also subsidized by local government.

Since 1999, China government has begun to fully operate Urban Basic Medical Insurance Scheme. The governments at each level paid the premium for the workers in government organs and institutes following the government regulation. During the course of practical implementation, the subsidy of each level government is different for the disparity of fiscal capacity.

In order to provide medical security to rural residents, China government determined to pilot NCMS since 2003. Central government and local government at pilot regions are responsible for giving the subsidy to NCMS. The general mode is that the central government pays 10 yuan, the local governments pay 10 yuan and rural residents pay 10 yuan by themselves. The government subsidy for NCMS is listed in recurrent expenses on health. In order to push on with the establishment of New CMS, the central government decided to increase the subsidy for New CMS from 10 yuan up to 20yuan in 2006, and request the local government to increase subsidy on New CMS accordingly.

## Trends and Composition of Total Expenditure on Health

### China Total Expenditure on Health (CTEH)

From 1978 to 2003, China total expenditure on health increased from 11.02 billion yuan to 658.41 billion yuan, with per capita expenditure from 11.45 yuan up to 509.50 yuan, and the CTEH as a share of GDP increased from 3.04% to 5.62%. In terms of US dollars, the CTEH increased from 9.39 billion dollars in 1981 to 79.55 billion dollars in 2003, with per capita expenditure from 9.38 dollars up to 61.56 dollars in the same period (see annex Table 1).

From 1979 to 2003, the average growth rate of CTEH was 12.1% while the average growth rate of GDP is 9.4%, which shows that the growth of CTEH is slightly faster than GDP (Figure 1).

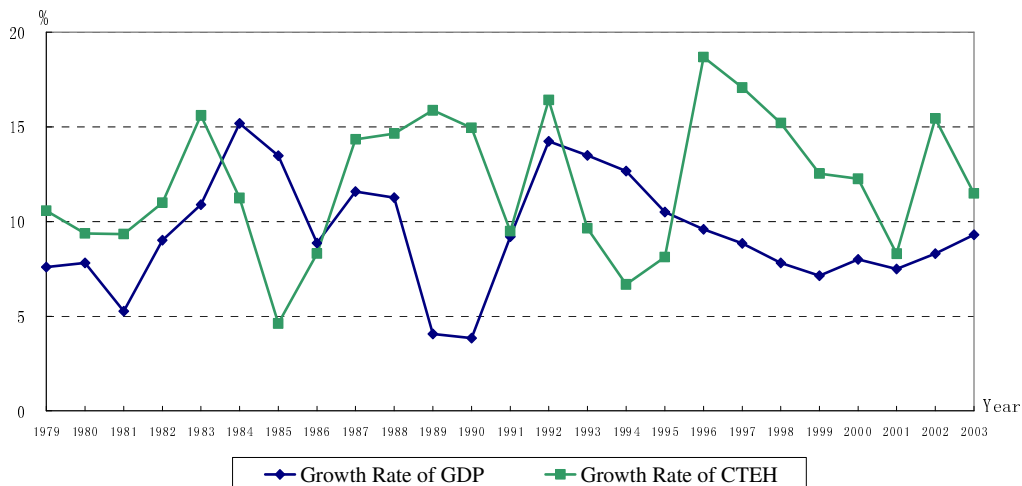


Figure 1 Growth Rate of GDP and CTEH

CTEH is comprised of three parts: government health appropriation, social health expenditure and out-of-pocket health payments (OOP) of residents. From 1978 to 2003, the government health appropriation as share of CTEH decreased from 32.16% to 16.96%, the share of social health expenditure fell from 47.41% to 27.16%, and the

share of OOP increased from 20.43% to 55.87%. As a result, OOP became the primary health financing source in China (see annex Table 2).

### Health expenditure of Zhejiang province and Shaanxi province

Zhejiang province and Shaanxi province are two typical provinces. Zhejiang province is a developed seaside province in the eastern of China, while Shaanxi province is a western and undeveloped province. The results of Zhejiang and Shaanxi provinces shows that the total expenditure on health kept continuously increase in recent years. From 1995 to 2003, The TEH of Zhejiang province increased from 12.07 billion yuan to 38.43 billion yuan, meanwhile the TEH of Shaanxi Province increased from 3.98 billion yuan to 12.77 billion yuan. There's large disparity in the per capita TEH between Zhejiang province and Shaanxi province. However, the share of TEH as GDP in western provinces was higher than that of eastern provinces (Table 1).

Table 1 Comparison of TEH in Some Regions

Regions	TEH (RMB 100million)			Per capita TEH (yuan)			THE as % of GDP		
	1995	1998	2003	1995	1998	2003	1995	1998	2003
Zhejiang	120.66	186.79	384.31	276.13	419.18	821.17	3.42	3.75	4.09
Shaanxi	39.78	62.90	127.65	113.24	174.93	350.48	3.98	4.55	5.32
Gansu	25.11	39.63	66.26	106.49	161.56	258.05	4.54	5.55	5.71
China	2155.13	3678.72	6584.10	177.93	294.86	509.50	3.69	4.70	5.62

\* Note: due to lack of the data in Gansu in 2003, the data for Gansu in column 2003 was the data in 2002.

As viewed from the development of TEH, the growth of TEH of Zhejiang province and Shaanxi province was faster than that of GDP, therefore, the elasticity of TEH to GDP was lager than 1. In constant price, the average growth rate of TEH in Zhejiang province and Shaanxi province was respectively 14.04% and 13.37% from 1995 to 2003, and the growth rate of GDP was 11.53% and 9.32% in the corresponding period (Table 2).

Table 2 Trends of TEH in Some Regions, 1995-2003

Regions	Average growth rate of GDP %	Average growth rate of TEH %	Average Elasticity	Elasticity in 2003
Zhejiang	11.53	14.04	1.22	0.67
Shaanxi	9.32	13.37	1.43	0.91
Gansu	9.28	12.92	1.39	-
China	8.30	14.16	1.70	1.23

Note: Elasticity reflects the relationship between the growth speed of Total Expenditure on Health and that of GDP. Elasticity = growth rate of TEH(%) / growth rate of GDP(%).

As viewed from health financing composition, the proportion of government health expenditure was relative low: 14% in Zhejiang province and 20% in Shaanxi province. However, the share of OOP was above 50% in both provinces, which indicated the health financing relied heavily on market scheme and the role of government on health financing is relatively weak (Table 3) . There are mainly two aspects that caused the decreasing trend of social health expenditure as share of TEH. First of all, the enterprise medical expenditure was impacted greatly during the economic transition period, especially for Shaanxi province in undeveloped economy status, which caused the social health expenditure increased slowly. Secondly, Out-of-pocket health payments (OOP) increased rapidly in the same period, so dose the OOP as share of TEH, which play a role to cause the decline of social health expenditure as share of TEH. This tendency didn't change until 2001. Since 2002, Social Health expenditure increased rapidly due to the enlarging of UBMI coverage and the establishment of New CMS. Hence, the share of social health expenditure as TEH began to rise accordingly.

Table 3 Composition of TEH in Zhejiang and Shaanxi provinces

Year	TEH by Source (100million)		Gov. health exp.(%)		Social health exp.(%)		OOP (%)	
	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi
1995	120.66	39.78	15.21	19.15	34.01	31.10	50.78	49.75
1996	141.07	47.44	15.07	17.14	33.71	29.26	51.22	53.60

1997	165.58	55.43	13.37	16.03	32.85	28.23	53.78	55.73
1998	186.79	62.90	13.94	15.80	31.67	28.16	54.39	56.04
1999	219.58	66.88	13.02	15.24	33.50	27.02	53.48	57.74
2000	256.55	81.08	12.75	15.39	29.55	24.78	57.70	59.83
2001	291.68	93.72	13.77	19.43	29.83	22.75	56.40	57.82
2002	332.93	112.81	13.89	18.38	29.11	22.92	57.01	58.70
2003	384.31	127.65	14.03	20.07	31.00	23.96	54.97	55.97

Comparing urban and rural health expenditure, the disparity of urban and rural health expenditure in Zhejiang province is about 3 times, which is smaller than that of Shaanxi province, and the disparity between the urban and the rural shows a decreasing tendency. The status of western provinces, Shaanxi province and Gansu province, is similar, that is the disparity of TEH per capita between urban and rural was larger than Zhejiang province and the disparity is enlarging (table 4). Table 4 also shows difference of urban/rural disparities across provinces. The difference is mainly caused by the economy status of different provinces and the health financing structure. Zhejiang province is the most developed areas in China. During its economy development, the integration of urban and rural in Zhejiang made great progress, and the difference between urban and rural lessened. The data of National Bureau of Statistics showed that the ratio of per capita urban disposable income to rural net income per capita was 2, however the ratio in Gansu and Shaanxi was approximately 4. The urban/rural disparity of expenditure in these provinces was similar. The disparity of urban/rural ability to pay determined the difference of OOP in these provinces. The ratio of urban/rural per capita OOP was 2.41 in Zhejiang province, but the ratio in Shaanxi reached 4.61. Since OOP contributes the major finance source in all provinces, with the share above 50%, the difference of urban/rural OOP disparity determines that the disparity of urban/rural per capita TEH is smaller than Shaanxi province.

With the social-economic development and urbanization acceleration, it's important to strengthen the rural health and increase the level of health expenditure of rural residents.

Table 4 Comparison of per capita TEH between urban and rural in some regions

Indicators	region	unit	2000	2001	2002	2003
Urban per capita TEH	Zhejiang	yuan	1116.40	1130.87	1279.74	1501.89
	Gansu	yuan	572.45	666.31	750.40	—
	Shaanxi	yuan	607.12	667.83	797.37	933.23
	China	yuan	812.95	841.20	987.07	1108.91
Rural per capita TEH	Zhejiang	yuan	327.03	412.70	452.62	504.37
	Gansu	yuan	103.77	115.61	127.01	—
	Shaanxi	yuan	108.69	131.19	153.07	161.46
	China	yuan	214.93	244.77	259.33	274.67
Urban/Rural	Zhejiang		3.41	2.74	2.83	2.98
	Gansu		5.52	5.76	5.91	—
	Shaanxi		5.59	5.09	5.21	5.78
	China		3.78	3.44	3.81	4.04

Note: The rural and urban expenditure was estimated by the financial contribution of residents, and per capita value was estimated according to agricultural population and non-agricultural population. The health expenditure can be categorized as the following parts according to finance channel: OOP, social health insurance, private health expenditure, the government expenditure born by urban and rural residents through tax and others. The OOP of urban and rural residents were estimated by data of National Bureau of Statistics. Urban social health insurance expenditure includes Urban Basic Medical Insurance System, GIS, LIS and other social insurance. Rural social health insurance includes rural New CMS, township enterprises medical expenditure, which came from related statistics year book or the estimation result of China NHA. Private health insurance data came from China Statistical Yearbook and allocate to urban and rural according to the ratio of private health insurance premium paid by urban and rural residents from China National Health Services Survey. Government health expenditure allocated to urban and rural based on the proportion of tax burden of urban and rural residents estimated by household living standard survey data. The others, accounting for 8% of THE, was allocated to each part according to their proportion.

## **China Government Health Appropriation**

### **Government Health Appropriation**

China government health appropriation includes recurrent expenses on health, recurrent expenses on traditional medicine, recurrent expenses on food and drug administration, expenses on family planning, expenses on health administration, Insurance fund of government employees and GIS, etc.

In 2003, China government health appropriation was 111.69 billion yuan, which accounted for 4.53% of government fiscal expenditure, 16.96% of CTEH and 0.95% of GDP. The government health appropriation per capita is 86.43 yuan (see annex Table 3) .

From 1978 to 2003, China government health appropriation per capita increased from 3.68 yuan to 86.43 yuan, which was more than 20 times of the amount in 1978. However, the share of government health expenditure as CTEH decreased from 32.16% in 1978 to 16.96% in 2003, the share as fiscal expenditure also fell from 6.11% (the highest level) down to 4.53% in 2003 (see annex Table 3).

From 1995 to 2002, the amount of government health appropriation in Zhejiang and Shaanxi provinces had been increasing, but its share of TEH was declining, down from 15.21% to 13.89% in Zhejiang province and from 19.15% to 18.38% in Shaanxi province. In 2003, the government health appropriation as share of TEH increased in Zhejiang and Shaanxi because the government increased the public health input after the breakout of “SARS” (Table 5). The government health appropriation as share of government fiscal expenditure decreased rapidly from 10.18% in 1995 to 6.01% in 2003 in Zhejiang, which was close to that of Shaanxi province. Furthermore, Government health appropriation accounted for only 0.57 percent of GDP in Zhejiang province, but the proportion in Shaanxi province reached 1.07%. **Government**

health appropriation as share of GDP in Shaanxi province increased rapidly. There are mainly two factors: firstly, as the central government strengthened transfer payments, the government expenditure as share of GDP showed an increasing trend, and its average growth speed exceeded the falling speed of government health appropriation as share of government expenditure in Shaanxi province; Secondly, the government at each level increased the health input since 2001, especially in 2003 when the government health expenditure as share of government appropriation was visibly increasing. Therefore, the government health appropriation as share of GDP increased rapidly since 2001.

Table 5 The main indicators of government health appropriation in Zhejiang and Shaanxi provinces

year	Government health appropriation (100million)		% of GDP		% budgetary expenditure		% of TEH		Per capita government health appropriation (yuan)		Gov. Exp. As % of GDP
	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Shaanxi
1995	18.36	7.62	0.52	0.76	10.18	7.42	15.21	19.15	42.01	21.68	10.24
1996	21.26	8.13	0.51	0.69	9.95	6.68	15.07	17.14	48.32	22.95	10.33
1997	22.14	8.89	0.48	0.68	9.22	6.45	13.37	16.03	49.91	24.89	10.23
1998	26.04	9.94	0.52	0.72	9.08	5.98	13.94	15.80	58.44	27.63	12.04
1999	28.58	10.19	0.53	0.69	8.31	4.94	13.02	15.24	63.87	28.18	13.97
2000	32.70	12.48	0.54	0.75	7.58	4.59	12.75	15.39	71.16	34.25	16.35
2001	40.16	18.21	0.60	0.99	6.72	5.20	13.77	19.43	87.07	49.76	18.98
2002	46.23	20.74	0.59	1.02	6.16	5.12	13.89	18.38	99.48	56.44	19.89
2003	53.92	25.62	0.57	1.07	6.01	6.13	14.03	20.07	115.22	70.34	17.43

In 2003, China government health appropriation (exclude expenses for medical research) was 111.29 billion yuan, among which the 8.80 billion yuan (account for 7.88% of total amount) came from central government and 102.49 billion yuan (account for 91.76% of total amount) from local government. The result showed that the health input was mainly born by local government. In 2003, the central government fiscal expenditure was 742.26 billion yuan which accounted for 30.2% of China fiscal expenditure at national level, however, there was only 1.19% of fiscal

expenditure used on health. The fiscal expenditure of local government was 1718.46 billion yuan which accounted for 69.85% of national amount, and the proportion used on health was 5.96% (table 6).

Table 6 China government health appropriation by government level, 2003

	Government Health appropriation (100million)	% of total Government Health appropriation (%)	% of budgetary expenditure at same level (%)
Central government	87.97	7.88	1.19
Local government	1024.86	91.76	5.96

Note: Government health appropriation in this table does not include Expenses on Medical Research.

For the use of government health appropriation, the share used on medical institutes was above 40% from 1990 to 2003. Before the medical insurance system reform, the share of GIS expenditure was close to 30% in 2000. After the implementation of Urban Basic Medical Insurance System (UBMI), the government input on medical insurance was increasing rapidly, and its share reached 22.27% in 2003. Moreover, the share of government appropriation on family planning increased and accounted for 12.7% of government health appropriation at present (see annex table 4).

For Shaanxi and Zhejiang provinces, the proportion of government appropriation on medical institutes was high, but the proportion showed a decreasing tendency. The subsidy for demander was mainly the UBMI premium of workers in government organs and institutes paid by government. With the implementation of rural NCMS, the subsidy of governments on rural NCMS has become an important component of government health appropriation since 2003. The expenses on family planning accounted for a high proportion in each province, especially in Shaanxi province, which accounted for 20% of total government health appropriation (see annex table 5, 6).

## **Input and use of recurrent expenses on health**

Recurrent expenses on health, including recurrent expenses on traditional medicine, can reflect the recurrent government input on health. In 2003, the national recurrent expenses on health was 43.93 billion yuan, the recurrent expenses on traditional medicine was 3.45 billion yuan, and the total amount was 47.38 billion yuan (37.59 yuan per capita) which accounted for 1.92% of national fiscal expenditure and 7.20% of CTEH.

From 1978 to 2003, the recurrent expenses on health increased from 2.18 billion yuan to 47.38 billion yuan, and the per capita recurrent expenses on health increased from 2.26 yuan to 37.59 yuan. However the growth rate was still lower than that of fiscal expenditure. The recurrent expenses on health as share of fiscal expenditure decreased from 2.96% in 1982 to 1.73% in 2002, but rallied in 2003. (see annex table 7)

Although there's difference in the recurrent expenses on health per capita between Shaanxi and Zhejiang provinces, the recurrent expenses on health as share of fiscal expenditure was declining in both provinces, which reflected the general problem-----the growth of government input on health was not harmony with the growth of fiscal expenditure (see annex table 8, 9).

Recurrent expenses on health are the government subsidy used on public hospitals, sanitariums, health centers, policlinics, disease control and prevention institutes, maternal and child health institutes and professional training institutes affiliated to public health sector and traditional medicine sector.

In 2003, the 35.17% of the recurrent expenses on health (including expenses on traditional medicine) was used on city hospitals and city traditional medicine hospitals, 11.45% used on county hospitals and county traditional medicine hospitals, 14.17%

used on medical institutes at grass-root level such as community health centers and rural township health centers, 17.18% used on disease control and health supervision institutes, and approximately 3.47% used on maternal and child health institutes. As viewed from per capita level, the recurrent expenses on health per capita of city hospital were 12.8 thousand yuan, which were 2.3 times of county hospital and 2.4 times of township health center. The per capita recurrent expense on health of disease control institutes was close to 30 thousand yuan, however, the amount was only 13.3 thousand yuan in maternal and child health institutes.

From 1995 to 2003, for the composition of China recurrent expenses on health, the share of hospitals was kept in high level, the share of county hospitals was about 10%, but the share of subsidy received by township health center was declining obviously from 20.43% to 14.17%. The proportion of maternal and child institutes was also decreasing, so was the share of disease control institutes in the period from 1995 to 2001, however the share of disease control institutes went up since 2002 and reached 15.14% in 2003 (table 7).

Table 7 Components of recurrent expenses on health (1995-2003)

Unit: %						
year	City hospital	County hospital	Health center	Disease control and prevention institutes	Maternal and child health institutes	others
1995	31.03	10.03	20.43	14.20	4.02	20.29
1996	31.80	10.27	20.46	13.63	4.01	19.83
1997	32.52	9.87	19.97	13.71	4.08	19.85
1998	32.67	9.52	19.78	14.12	4.10	19.81
1999	34.89	12.92	17.82	13.06	3.88	17.43
2000	36.10	12.62	17.08	13.32	3.98	16.90
2001	37.25	12.77	15.88	13.11	3.88	17.11
2002	38.05	11.72	15.58	14.17	3.93	16.55
2003	35.17	11.45	14.17	15.14	3.47	20.60

Note:

1. Recurrent Expenses on Health includes Recurrent Expenses on Traditional Medicine in this table.
2. Health center includes city community health center and rural township health centers.
3. Others: the item here is mainly comprised of the government subsidies to cadre training

facilities, and fund for payments owed of patients. The fund for payments owed of patients is the government subsidy to compensate the medical facilities for their expenditure during treatment of patient that the medical facilities must treat according the regulation but without any payment channel(for example, the treatment expenses to traffic accident. If the injured person died in condition all rescue measures proved ineffectual, but the dead was unidentified or the driver responsible for the accident get away. In this circumstance, nobody will pay the treatment expenditure), and the medical outlays during the treatment that the patients can not pay or pay in full due to various causes.

The results of Shaanxi and Zhejiang provinces were similar with national tendency, that is to say, the share of city hospitals was relatively high, the share of township health centers was decreasing, the share of disease control institutes was relatively constant and increased in 2003, and the share of maternal and child health institutes showed a decreasing trend. The results above indicated that the recurrent expenses on health used on public health and medical institutes at grass-root level relatively weak (see annex table 10 and table 11).

#### **Government appropriation on social medical security**

Government appropriation on social medical security mainly includes appropriation on UBMI and appropriation on NCMS.

#### **Government appropriation on UBMI**

China government fully implemented UBMI system since 2000 and built up the medical insurance mode characterized with “combination of social pooling and individual account”. During the process of UBMI implementation, the economic responsibility of government was incarnated in two facts. On the one hand the government had the responsibility to pay the part of premium for the workers of government organs and institutes when they participated the UBMI, on the other hand the government was responsible for the remedy of finance risk of UBMI fund, and should subsidy the UBMI fund to ensure the implementation of UBMI if there was overspending of UIBMI fund.

From 2001 to 2003, the fund income of UBMI increased from 34.06 billion yuan to 89.00 billion yuan accounting for 30% of government health appropriation. However, the insured rate of enterprises is relative low. With the development of UBMI, there would be more and more workers of enterprises and in other professionals to participate UBMI, which will make the share of government input in UBMI fund decline (Table 8) .

Table 8 Fund of Urban Basic Medical Insurance System (2001-2003)

year	Fund income	Among which: government contribution	Government contribution as % of UBMI fund
	( 100 million yuan)	( 100 million yuan)	(%)
2001	340.61	96.69	28.39
2002	607.78	160.12	26.34
2003	889.96	236.31	26.55

### Government appropriation on Rural New Cooperative Medical Scheme

At present, China government put priority on the establishment of New Rural Cooperative Medical Scheme (New CMS). China government decided to carry out pilot of New CMS in 2003. The total fund of New CMS is 3084 million yuan in 2003, among which the government subsidy accounts for 42.82 percent (see table 9).

In 2003, the total amount of New CMS fund in Zhejiang province was 293 million yuan, among which the contribution of government at each level was 68 million yuan, accounting for 23% of total New CMS fund. The total amount of New CMS fund in Shaanxi province was 20 million yuan, among which the government contribution was 12 million yuan, accounting for more than 60% of total New CMS fund. According to the regulation of New CMS implementation, central government subsidizes the New CMS in western areas. As a western province, governments at each level act as the main channel of health financing in Shaanxi province. Although the government of Zhejiang province contributed to New CMS, the finance mainly relied on individuals

and collective economy, because Zhejiang province didn't receive central government subsidy. (Table 9)

Table 9 New CMS fund (2003)

	unit	Nation	Zhejiang	Shaanxi
New CMS fund	100 million yuan	30.84	2.93	0.20
Central government	%	9.64	0.00	31.71
Local government	%	32.66	23.41	31.71
Collective economy	%	14.63	25.94	0.00
Rural residents	%	41.30	47.44	36.58
others	%	1.77	3.21	0.00

Note: The local government contribution includes premium for New CMS paid by Medical Assistance Scheme.

## **Equity and Efficiency of Government Health Appropriation**

### **Equity of Government Health Appropriation**

#### **Disparity among different areas**

Under the fiscal decentralization scheme, the central government applied fiscal system with division of revenue and expenditure and with management at different levels. This fiscal system reduced the amount of fiscal revenue delivered to central finance from developed area, which practically weakened the transfer payment between eastern area and western area. There was large disparity between the fiscal income of eastern and western areas for the enlarging tendency of disparity of economic development. The disparity above ultimately caused the gap in government health appropriation among different areas.

Figure 2 shows the recurrent expenses on health per capita of some areas in China in 2003. There was large gap among the levels of recurrent expenses on health of different areas, except the minority areas such as Tibet and Xinjiang autonomous region, etc. The per capita recurrent expenses on health of economic booming areas such as Shanghai, Beijing, Tianjin, Guangdong and zhejiang province were higher than that of areas such as Henan, Anhui, Gansu and Shaanxi.

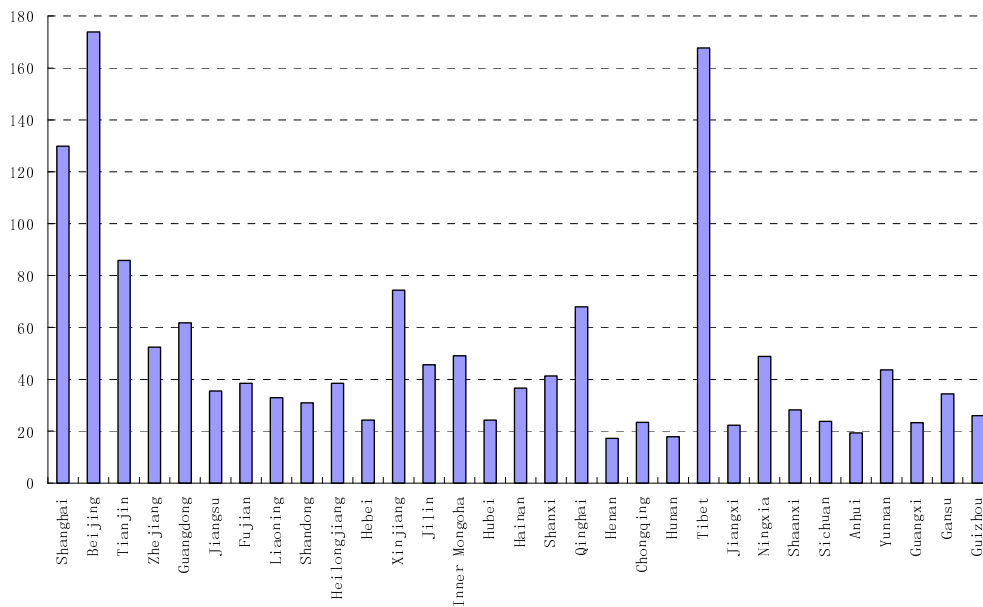


Figure2 Per capita recurrent expenses on health of areas in China 2003

Zhejiang and Shaanxi province are belonging respectively to eastern area and western area and can be representative of the rich and poor area in China. In 2003, the per capita GDP of Zhejiang and Shaanxi provinces was respective 20074.79 yuan and 6586.93yuan, and the per capita fiscal revenue was 1509.83 yuan and 486.83 yuan. The government health appropriation was directly influenced by the disparity in fiscal capacity of these two provinces. In 2003, per capita government health appropriation was 115.22 yuan in Zhejiang province and 486.83 yuan in Shaanxi province, whilst the recurrent expenses on health of Zhejiang and Shaanxi provinces were respectively 47.47 yuan and 28.51yuan, which reflected the gap between the government health input of eastern and western areas (Table 10).

Table10 Per capita GDP and THE of Zhejiang and Shaanxi province in 2003

	Unit: yuan		
	Zhejiang	Shaanxi	Zhejiang/Shaanxi
Per capita GDP	20074.79	6586.93	3.05
Per capita government revenue	1509.83	486.82	3.10

Per capita government health appropriation	115.22	70.34	1.64
Per capita recurrent expenses on health	47.47	28.51	1.67

Figure 3 shows the relationship between per capita recurrent expenses on health and economic development of cities in Zhejiang province. The “X” axis is ranked by per capita GDP and the “Y” axis is per capita recurrent expenses on health. The figure shows a general tendency that the per capita recurrent expense is higher in the cities with high economic development level except Zhoushan city which is island area without comparability. The result shows that there’s large disparity among areas in one province, hence the per capita government health subsidy among different areas is not equal. In this case, the provincial government should strengthen the transfer payment among governments at different level, so as to ensure the level of per capita government health subsidy retain a balance at different areas.

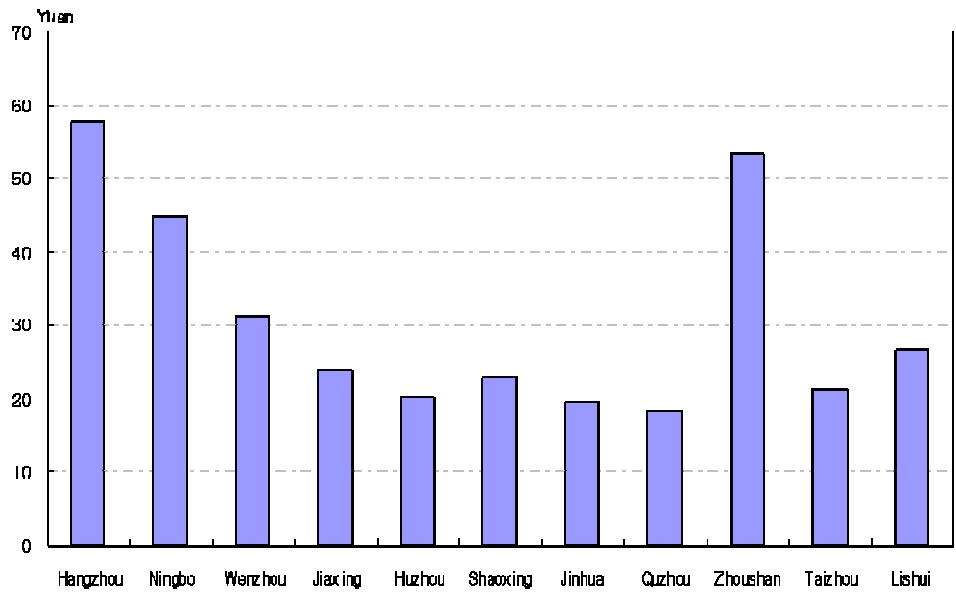


Figure 3 Per capita recurrent expenses on health of areas in Zhejiang province (2002)

## Inequity between the Urban and the Rural

China is in classical dual economic structure. The division of fiscal right weakens the capacity of government on transfer payment between the urban and the rural, especially weaken the fiscal capacity of rural poor area. If we define the recurrent expenses on health of city health institutes as urban and expenses on health of county health institutes and below as rural, the result showed large disparity between rural and urban recurrent expense. The ration of urban to rural expenses was 5.36 and the ratio in Zhejiang and Shaanxi province was respectively 3.15 and 4.51 (Table 11).

Table 11 Per capita Rural and Urban recurrent expenses on health of Shaanxi, Zhejiang and China (2002)

	Unit	China	Zhejiang	Shaanxi
Rural	yuan	13.75	22.06	14.05
Urban	yuan	73.71	99.44	44.26
Urban/Rural		5.36	4.51	3.15

Note: Urban and rural recurrent expenses are estimated based on government subsidy received by urban and rural medical facilities. The recurrent expenses received by county and below medical facilities were calculated as rural recurrent expenses, the other part was categorized as urban recurrent expenses on health. The per capita urban and rural expenses were calculated by agricultural and non-agricultural population.

It is an important content of “welfare society” goals to eliminate the disparity between urban and rural. China government is dedicated to eliminate the disparity between urban and rural, and put emphasis on the responsibility of government on health input and rural health construction. From 2001 to 2003, although there was large gap between per capita recurrent expenses on health of Shaanxi and Zhejiang province,

the gap showed a reducing tendency (Table 12).

Table12 Ratio of per capita urban recurrent expenses on health to rural of Zhejiang, Shaanxi and China, 2002

	2001	2002	2003
Shaanxi	3.60	3.15	3.16
Zhejiang	-	4.51	3.77
China-	5.68	5.36	4.26

### Efficiency of Government Health Appropriation

As a kind of public fiscal behavior, government health appropriation is a way to reallocate social welfare and a useful mode to alleviate poverty and inequality among different social-economic groups. Therefore, the government subsidy should have target efficiency to be mostly benefit the poor and vulnerable population, so as to ensure the allocation efficiency of government health subsidy and the benefit of target population.

The largest proportion of government health subsidy is used on medical services. Because of the difference of medical utilization mode, there's large difference in the benefit among residents at different economic status. As viewed from result of Zhejiang and Shaanxi province, the poorest 20% residents benefit much more less than the richest 20%, hence the majority beneficiary is not the poor but the rich (Table 13).

Table 13 Benefit Incidence of government medical subsidy by quintile

Quintile	Unit: %					
	Outpatient subsidy		Inpatient subsidy		All medical subsidy	
	Shaanxi	Zhejiang	Shaanxi	Zhejiang	Shaanxi	Zhejiang
Poorest 20%	15.88	14.42	8.49	7.5	12.71	11.28
2 <sup>nd</sup> poorest	16.34	12.59	13.61	5.83	15.17	9.53

Middle	14.22	18.53	12.36	10.71	13.42	14.98
2 <sup>nd</sup> richest	22.48	20.7	21.23	18.57	21.95	19.74
Richest 20%	31.08	33.76	44.32	57.39	36.75	44.47

Note: The subsidy received by residents is equal to the quantity of health services multiply unit subsidy of health services. The quantity of health service utilization comes from Household Health Survey and adjusted by official record quantity of medical sector. Unit subsidy is estimated based on the data of medical subsidy of medical facilities at different level and different region, outpatient and inpatient expenditure of medical facilities, and outpatient visit times and inpatient days.

The concentration Index (CI) and Kakwani Index (KI) is the import indicators to reflect the equity of resource distribution. The CI is used to assess the absolute equity of government health subsidy, which reflects the distribution of absolute value of government health subsidy among individuals. The value of CI ranges from -1 to 1. If the value of CI is positive, the government health subsidy is unequal as the subsidy is concentrated in the rich individuals. In contrast, the negative value of CI reflects the poor benefit more from government subsidy; the larger is the absolute value, the more equal is the government subsidy.

The result shows the similar problem of government medical subsidy in spite of the large disparity of economic level of the two provinces. Relative to the poor individuals, the rich people benefited more from government medical subsidy, especially the government medical subsidy on inpatient services was more concentrated in the rich than outpatient subsidy. The main reason is that the fee of inpatient services is usually higher than outpatient services, while the health finance relies heavily on OOP with low coverage of health security system. For the restriction of the low ability to pay, the poor population utilized fewer inpatient health services, but the rich people utilized more than the poor. However, the mode of government medical subsidy is subsidized by health services provider, the one utilized more services benefit more from

government medical subsidy, which caused the inequality in distribution of government medical subsidy (Table 13).

Table14 Concentration Index and Kakwani Index of government medical subsidy in Zhejiang and Shaanxi province

Concentration Index	Outpatient subsidy	Inpatient subsidy	All medical subsidy
Shaanxi	0.1471	0.3189	0.2207
Zhejiang	0.1934	0.4761	0.3216
Kakwani Index			
Shaanxi	-0.2132	-0.0414	-0.1396
Zhejiang	-0.1615	0.1212	-0.0333

Kakwani Index is used to assess the relative equity in government subsidy, which can reflect the distribution of government health subsidy relative to the distribution of social welfare. The range of KI is from -2 to 1. If the value is positive, the KI indicates the proportion of government subsidy received by the rich (or the poor) is larger (or smaller) than the proportion of their welfare in total social welfare, which indicate the government medical subsidy enlarge the relative gap between the rich and the poor. If the subsidy is negative, the government medical subsidy is concentrated among the poor, which can reduce the relative gap between the rich and the poor.

The result of Zhejiang and Shaanxi province shows that the KI of two provinces is negative (except the KI of inpatient subsidy of Zhejiang province), the medical subsidy reduced the relative gap between the rich and the poor. The extent of relative equity of outpatient subsidy is better than the inpatient subsidy. The KI of Zhejiang government inpatient subsidy, which is positive, indicates that the inpatient subsidy enlarged the relative gap between the rich and the poor in Zhejiang province.

## **Determinants of Government health Appropriation**

### **The influence of income inequality on the equity of government health appropriation**

At present, the inequity in distribution of resident's income raised large inequity in ability to pay on medical goods and services. With the same health condition, the actual utilization and expenditure are influenced by the economic status of residents. To some extent, the extent of inequity in income distribution determines the effect of income inequality on health utilization and expenditure. The inequity of income allocation is the result caused by market economy, which needs the effective intervention of government to control and eliminate the negative effect caused by the income inequality.

### **The health finance structure is not reasonable, and the residents are bore heavily disease economic burden**

From 1978 to 2003, the OOP as share of CTEH increased from 20% to 56%. Many poor people faced the risk of impoverishment of expensive medical expenses for the lack of social safety net. To avoid being pushed into poverty by medical expenses, it is necessary to establish comprehensive social medical insurance system to reduce the impact of OOP on households. The finance scheme with broad social medical system can eliminate the impoverishment of OOP.

### **The medical security system does not meet the need, and the residents faced disease economic risk**

According to the result of the third *China Household Health Interview* in 2003, the 44.8% of urban population and 79.1 % of rural population had not any health security. Among the urban residents, there were 76% percent of residents without medical security in the poorest 20% household. As a total, there were 48.9% residents with

sickness didn't go to see the doctor in the recall period, among which the proportion of urban residents is 57% and the proportion of rural residents is 46%. Further to explore the reason, the share of economic obstacle is respective 36% and 39% of the urban and rural. There are 29.6% of population report that should utilize inpatient services but not, and 43.3% of inpatients asked to leave hospital with 63.9% of them are caused by economic reason. Therefore, the residents face serious risk for the lack of medical security system.

### **The mode of allocation of government health subsidy**

The shortage of government health input is the primary problem in health financing, but we can not ignore the allocation and efficiency of government health subsidy. The lack of government fiscal subsidy requests high efficiency and equity in the allocation of government health subsidy. The principle applied in China is to subsidize the provider, including "whole-budget management" subsidy method and "balance budget management" subsidy method according to the category of health institutes. The kind of subsidy method was mainly formed in planned economy period and adopted to the planned economic system. However, the hospitals showed the tendency of commercial operation with the establishment of market economic scheme. The shortage of subsidy was arising, which represented extremely on the fact that the government allocated majority of health subsidy to hospitals at second and third level, but not the community health centers and township health centers generally utilized by population with low income. At present, 80% of health resources concentrated in the city, among which the 30% concentrated to the large size hospital. However, as viewed from the mode of health services utilization, low income population mainly utilized the health institutes at grass-root level such as community health center and township health center, but more rich people utilized city hospital than the poor, which caused the government medical subsidy mainly benefited the rich people but not the poor people. At present, China government has decided to implement medical assistance scheme to directly subsidy the poor residents.

## **Other Findings from the Fieldwork**

### **Problem in township public health services provision**

Recently, China National Health Accounts task force executed a typical survey in Wudalianchi county, Heilongjiang province, an undeveloped agriculture county in the central area of China. The surveyed township health center serves for 19, 820 residents in the township, with all preventive services for the township residents including children vaccination, disease control, prevention of infectious disease, maternal and child health, family planning, etc. Many public health services listed above need the professionals to provide the services in the home of residents, such as prevent and treatment of tuberculosis, which needs the professionals take the medicine to the home of patient and monitor the patient to take the medicine. It's also a massive expenditure for the township health center to provide health education services. Almost all the public health services are provided without charge; however the health centers received no subsidy for the services. To provide the public services, many township health centers need to use some of the subsidy of staff expenses to provide public health. In 2004, the subsidy from county fiscal only accounted for 43% of the total wages of staffs, the gap are born by township health centers themselves. However, for the restriction of equipment and capacity of health professionals, the rural residents went to village clinics for indisposition and went to county hospitals when they were taken serious diseases. This utilization mode determines the township health center was difficult to operate for the low business income.

The survey found that both the public health institutes and the medical facilities face the scarcity of government subsidy. The government subsidy to public health institutes can not meet the need to provide public health services, and quite a proportion of business expenses are resolved by charge of services. Preventive and Medical Services Net at county, township and village level is a feature and advantage of China rural health system, among which township health center is the hinge of this net,

playing a role as a connecting link between the preceding and the following. It not only provides basic medical services, but also delivery a lot of public health services. However, under the fiscal decentralization scheme, quite a number of township health centers in undeveloped areas have difficulty in operating for the lack of fiscal subsidy. Furthermore the government subsidy was appropriated without specific purposes. As a result, township hospitals can not improve their equipment and many professionals leave health centers for city medical institutes. The situation is even serious in some western areas, where the township health centers are lack of money to remedy buildings, lack of equipment to provide basic health examination and simple surgery. In some poor areas, some township health centers only have some quite simple equipment such as blood-pressure meter, stethoscope and thermometer. In this case, many health institutes served rural residents even have not enough capacity to provide public health such as preventive health services. In order to ensure the public health provision, some township health centers firstly allocated government subsidy to meet the need of public health services provision, and use the subsidy for staff wages after that. The village clinic didn't receive any government subsidy. However, to provide some public health services is the requirement for village clinic to practice medicine.

### **Good experiences in township public health services provision**

It's an essential issue to settle the operation difficulty of township health centers. Another typical survey may provide us a revelatory example. This county implemented rural public health reform to put emphasis on rural health construction, change the subsidy scheme from "subsidy for provider" to "subsidy for consumer". During the reform stage, there were transfer payments from provincial fiscal for the gap of public health expenses in the county.

The county is an undeveloped agricultural county in the province with 451 thousand residents. There are 30 township health centers that mainly provide basic medical

services and public health services such as maternal and child health, children vaccination, etc. Before the reform, the majority of township health centers had difficulty in operating. The government subsidized township health centers by amount of beds or staffs, which were approximately 3500 yuan per capita. The subsidy level is quite low, which only accounted for 20% of total amount of staff wages. The village clinics didn't get subsidy from government, hence they did not provide public serves except for informing the residents to vaccinate.

According to the conditions and problems of rural health in this county, the government implemented reform to strengthen the rural health system. The government firstly identified the content of rural public health, which included four primary components such as disease control, health supervision, maternal and child health and basic medical services. The reform emphasized the responsibility of governments of input on rural public health. The county government increased the input to strength rural public health services net and transformed the function of township health centers to public health services and primary health care provision. On the other hand, the provincial government transferred some payments to make up for the public funds gap in the county. Based on estimation of the cost of public health services items, the expenses of public health serves were 6061.1 thousand yuan (Note: the data of cost of public health services are from the document of public health reform in Chun' an county, Zhejiang province) . The county fiscal afforded 1700 thousand yuan, and the rest of expenses with amount at 4360 thousand yuan were subsidized by provincial transfer payments.

In order to alleviate the burden of rural residents, the expenses of rural public health services items were mainly subsidized by government fiscal. The subsidy scheme followed the principle of "government pay for the services". The subsidy was allocated based on the serving population, content of services and the disparity of areas. The specific subsidy method was as following:

1. Subsidy for consumer

The government identified five categories of free services items including vaccination, antepartum examination, visits after child delivery, regular health examination of child below 3 years old, home health examination and establishment of health record. The government provided the “ticket for public health services” to residents to directly subsidize the consumers.

2. The government transformed the old subsidy scheme which subsidy the health institutes by inpatient beds or capita. Following the principle of “Government pay for the services”, the new subsidy scheme subsidized health institutes by the task of public services, serving population, the disparity of areas and the quality and quantity of services.

Through the rural health reform, the township health centers identify their functions and service content. Both the subsidy received by township health centers and their initiative to provide services has increased, which ensures the utilization of rural residents on public health and basic medical services.

## **Annex: Other activities**

As follow-up work of World Bank “China Rural Health Reform and financing” work, China Health Economics Institute (CHEI) work on “government health expenditure assessment” issues committed by World Bank. By now, CHEI has accomplished the review and summary of relevant data, data estimation, fieldwork, key informer interview and workshop in TORs.

### **Review and Summary of Relevant Data**

Through the review work, data collection and estimation, CHEI provided Nation Health Account data(1978-2003), total expenditure on health and government health expenditure of Zhejiang and Shaanxi province(1995-2003), household health services survey data and financial and statistics data of medical facilities to World Bank specialists for discussion. After the discussion and revision, the data result has been approved by World Bank specialists.

### **Field work in Zhejiang province and Shaanxi province**

Based on the review and summary of relevant data, CHEI did the field survey in Zhejiang and Shaanxi province. The institutes under the survey include Finance sector, Labor and Social Security Sector, medical insurance center, statistics sector, health sector, agriculture sector and civil administration sector, etc. Through the survey of related government organs and health facilities, CHEI collected detailed data on government public expenditure and complementary data of medical facilities. During the survey, CHEI also investigate the New CMS in Luochuan county (Shaanxi province) on financial level, individual premium, reimbursement level and method, etc. The survey was also executed in Chunan county, Zhjiang province on New CMS implementation and public health reform.

## **Key Informer Interview**

To get complementary information of government health expenditure, CHEI executed key informer interview and group discussion on the key issues such as UBMI, rural Medical Assistance Scheme, capacity building of township health center, regulation of private professionals, extra-budget income management of disease control institutes and management of maternal and child health facilities. Through the interview and discussion, researchers get more information on the conditions of health policy formulation and implementation, and the problems faced by township health centers when providing public health services.

## **Workshop**

CHEI held two workshops in Zhejiang and Shaanxi province. In the workshop, researchers reported and discussed the survey and analysis result to local stakeholders and related sector, discussed and exchanged the opinion of the research finding. The participants of workshops included officers of health administration institutes, staffs in public health institutes and hospitals, and other policy researchers. The participants discussed the health policy health reform issues, analysis the determinants of government health expenditure, which provided useful information for preparing government health expenditure assessment report.

## Annex

Table 1 China Total Expenditure on Health by Source, 1978-2003

Year	CTEH		CTEH as % of GDP	Per capita CTEH	
	RMB 100million	Dollar 100million	%	RMB yuan	dollar
1978	110.21		3.04	11.45	
1979	126.19		3.12	12.94	
1980	143.23		3.17	14.51	
1981	160.12	93.91	3.29	16.00	9.38
1982	177.53	93.81	3.35	17.46	9.23
1983	207.42	104.99	3.50	20.14	10.19
1984	242.07	104.03	3.38	23.20	9.97
1985	279.00	95.01	3.11	26.36	8.98
1986	315.90	91.49	3.10	29.38	8.51
1987	379.58	101.98	3.17	34.73	9.33
1988	488.04	131.12	3.27	43.96	11.81
1989	615.50	163.48	3.64	54.61	14.50
1990	747.39	156.25	4.03	65.37	13.67
1991	893.49	164.09	4.13	77.14	14.49
1992	1096.86	198.90	4.12	93.61	16.98
1993	1377.78	239.11	3.98	116.25	20.18
1994	1761.24	204.35	3.77	146.95	17.05
1995	2155.13	258.07	3.69	177.93	21.31
1996	2709.42	325.88	3.99	221.38	26.63
1997	3196.71	385.62	4.29	258.58	31.19
1998	3678.72	444.34	4.70	294.86	35.62
1999	4047.50	488.93	4.93	321.78	38.87
2000	4586.63	554.05	5.13	361.88	43.71
2001	5025.93	607.22	5.16	393.80	47.58
2002	5790.03	699.53	5.51	450.75	54.46
2003	6584.10	795.47	5.62	509.50	61.56

Table 2 Composition of CTEH by Source, 1978-2003

Year	CTEH by Source		Government health appropriation as % of CTEH	Social health exp. as % of CTEH	OOP as % of CTEH
	RMB 100million	Dollar 100million			
1978	110.21		32.16	47.41	20.43
1979	126.19		32.21	47.45	20.34
1980	143.23		36.24	42.57	21.19
1981	160.12	93.91	37.27	38.99	23.74
1982	177.53	93.81	38.86	39.49	21.65
1983	207.42	104.99	37.43	31.12	31.45
1984	242.07	104.03	36.96	30.41	32.64
1985	279.00	95.01	38.58	32.96	28.46
1986	315.90	91.49	38.69	34.93	26.37
1987	379.58	101.98	33.53	36.16	30.31
1988	488.04	131.12	29.79	38.93	31.28
1989	615.50	163.48	27.27	38.64	34.09
1990	747.39	156.25	25.06	39.22	35.73
1991	893.49	164.09	22.84	39.67	37.50
1992	1096.86	198.90	20.84	39.34	39.81
1993	1377.78	239.11	19.75	38.09	42.17
1994	1761.24	204.35	19.43	36.62	43.95
1995	2155.13	258.07	17.97	35.63	46.40
1996	2709.42	325.88	17.04	32.32	50.64
1997	3196.71	385.62	16.38	30.78	52.84
1998	3678.72	444.34	16.04	29.11	54.85
1999	4047.50	488.93	15.84	28.31	55.85
2000	4586.63	554.05	15.47	25.55	58.98
2001	5025.93	607.22	15.93	24.10	59.97
2002	5790.03	699.53	15.69	26.59	57.72
2003	6584.10	795.47	16.96	27.16	55.87

Table 3 Government Health Appropriation, 1978-2003

Year	Gov. health appropriation	As % of fiscal exp.	As % of TEH	As % of GDP	Per capita Gov. health exp.
	100 million yuan	%	%	%	yuan
1978	35.44	3.16	32.16	0.98	3.68
1979	40.64	3.17	32.21	1.01	4.17
1980	51.91	4.22	36.24	1.15	5.26
1981	59.67	5.24	37.27	1.23	5.96
1982	68.99	5.61	38.86	1.30	6.79
1983	77.63	5.51	37.43	1.31	7.54
1984	89.46	5.26	36.96	1.25	8.57
1985	107.65	5.37	38.58	1.20	10.17
1986	122.23	5.54	38.69	1.20	11.37
1987	127.28	5.63	33.53	1.06	11.65
1988	145.39	5.84	29.79	0.97	13.10
1989	167.83	5.94	27.27	0.99	14.89
1990	187.28	6.07	25.06	1.01	16.38
1991	204.05	6.03	22.84	0.94	17.62
1992	228.61	6.11	20.84	0.86	19.51
1993	272.06	5.86	19.75	0.79	22.96
1994	342.28	5.91	19.43	0.73	28.56
1995	387.34	5.68	17.97	0.66	31.98
1996	461.61	5.82	17.04	0.68	37.72
1997	523.56	5.67	16.38	0.70	42.35
1998	590.06	5.46	16.04	0.75	47.30
1999	640.96	4.86	15.84	0.78	50.96
2000	709.52	4.47	15.47	0.79	55.98
2001	800.61	4.24	15.93	0.82	62.73
2002	908.51	4.12	15.69	0.86	70.73
2003	1116.94	4.53	16.96	0.95	86.43

Table 4 Use of Government Health Appropriation in China

Unit: %

Year	Health Institutes	Medical Insurance	GIS	Food and drug administration institutes	Family Planning institutes	Capita investment	Health administration	Others
1990	45.96		23.68		8.29	4.13	2.43	15.51
1991	45.94		24.70		7.90	3.56	2.53	15.37
1992	45.66		25.41		8.47	3.36	2.79	14.31
1993	43.02		28.06		8.41	4.21	2.95	13.35
1994	46.46		26.88		7.73	3.61	3.20	12.11
1995	45.68		28.99		8.24	2.98	3.38	10.73
1996	44.00		29.46		8.20	4.68	3.38	10.28
1997	43.42		30.52		8.45	4.36	3.26	10.00
1998	41.20		29.95		8.54	3.41	3.37	13.52
1999	42.05		29.84	0.47	9.11	5.41	3.57	9.56
2000	41.73		29.74	0.42	9.09	4.14	3.78	11.11
2001	42.63	12.08	17.37	0.97	10.22	6.04	4.12	6.58
2002	42.01	17.62	10.08	1.98	12.63	5.11	4.92	5.66
2003	41.30	22.27	6.37	2.01	12.70	5.87	4.62	4.86

Table 5 Use of Government Health Appropriation in Shaanxi Province

Unit: %

Year	Health Institutes	Medical Insurance and GIS	Food and drug administration institutes	Family Planning institutes	Capita investment	Health administration	Other
1995	51.51	31.51	0.00	13.13	0.71	3.13	0.02
1996	52.31	30.75	0.00	12.30	1.23	3.42	0.00
1997	51.78	28.79	0.00	13.84	2.29	3.29	0.01
1998	52.46	25.95	0.00	17.07	1.33	3.18	0.00
1999	51.20	26.36	0.00	18.04	0.83	3.52	0.05
2000	45.34	32.57	1.96	16.03	0.59	3.32	0.18
2001	39.50	34.94	1.75	15.36	5.43	2.91	0.11
2002	37.69	39.47	1.81	16.76	1.14	3.02	0.11
2003	40.53	34.14	2.82	18.21	1.55	2.75	0.00

Table 6 Use of Government Health Appropriation in Zhejiang province

Unit: %

year	Health Institutes	Medical Insurance	GIS	Food and drug administration institutes	Family Planning institutes	Capita investment	Health administration	Others
1995	43.92		36.99		7.77	8.78	1.05	1.49
1996	41.74		39.04		8.08	8.80	0.95	1.40
1997	42.46		43.30		8.43	3.01	1.34	1.46
1998	39.27		43.85		6.88	7.09	1.49	1.41
1999	40.01		44.96		7.94	4.61	1.08	1.40
2000	38.26	0.52	46.81		8.41	3.40	1.20	1.40
2001	37.74	12.79	32.72	0.65	9.31	3.76	1.59	1.43
2002	40.01	26.13	16.43	2.18	10.66	2.05	1.51	1.03
2003	39.93	36.23	5.03	2.01	11.53	3.12	1.24	0.90

Table 7 The Main Indicators of Recurrent Expenses of Health, 1978-2003

Year	Recurrent expenses of health (100 million yuan)	% of CTEH (%)	% of government health appropriation (%)	% of budgetary expenditure (%)	% of Operating expenses for culture, education, science and health care (%)	% of GDP (%)	Per capita recurrent expenses of health (yuan)
1978	21.77	19.75	61.43	1.94	19.32	0.60	2.26
1979	24.28	19.24	59.74	1.89	18.38	0.60	2.49
1980	29.16	20.36	56.17	2.37	18.66	0.65	2.97
1981	31.60	19.74	52.96	2.78	18.44	0.65	3.17
1982	36.38	20.49	52.73	2.96	18.47	0.69	3.58
1983	40.58	19.56	52.27	2.88	18.15	0.68	3.96
1984	46.45	19.19	51.92	2.73	17.65	0.65	4.49
1985	53.19	19.06	49.41	2.65	16.80	0.59	5.09
1986	63.16	19.99	51.67	2.86	16.62	0.62	5.97
1987	64.04	16.87	50.31	2.83	15.90	0.54	5.97
1988	71.86	14.72	49.43	2.88	14.78	0.48	6.59
1989	80.49	13.08	47.96	2.85	14.55	0.48	7.27
1990	86.08	11.52	45.96	2.79	13.94	0.46	7.60
1991	93.75	10.73	45.94	2.77	13.24	0.43	8.19
1992	104.38	9.52	45.66	2.79	13.16	0.39	9.03
1993	117.04	8.49	43.02	2.52	12.22	0.34	10.07
1994	159.03	9.03	46.46	2.75	12.44	0.34	13.51
1995	176.92	8.21	45.68	2.59	12.06	0.30	14.93
1996	203.10	7.50	44.00	2.56	11.92	0.30	16.99
1997	227.34	7.11	43.42	2.46	11.94	0.31	18.85
1998	243.13	6.61	41.20	2.25	11.29	0.31	20.01
1999	269.52	6.66	42.05	2.04	11.19	0.33	22.00
2000	296.05	6.45	41.73	1.85	10.82	0.33	23.94
2001	341.34	6.79	42.63	1.81	10.16	0.35	27.43
2002	381.66	6.59	42.01	1.73	9.59	0.36	30.48
2003	473.79	7.20	42.42	1.92	10.52	0.40	37.59

Table 8 Recurrent Expenses on Health in Shaanxi province

year	Recurrent expenses on health	% of GDP	% of government fiscal expenditure	% of TEH	% of government health appropriation	Per capita Recurrent expenses on health
	(100 million yuan)	(%)	(%)	(%)	(%)	(yuan)
1995	3.92	0.39	3.82	9.86	51.51	11.17
1996	4.25	0.36	3.49	8.97	52.31	12.00
1997	4.60	0.35	3.34	8.30	51.78	12.89
1998	5.21	0.38	3.14	8.29	52.46	14.50
1999	5.22	0.35	2.53	7.81	51.20	14.43
2000	5.66	0.34	2.08	6.98	45.34	15.53
2001	7.19	0.39	2.05	7.67	39.50	19.65
2002	7.81	0.38	1.93	6.93	37.69	21.27
2003	10.38	0.43	2.48	8.14	40.53	28.51

Table 9 Recurrent Expenses on Health in Zhejiang province

Year	Recurrent expenses on health	% of GDP	% of government expenditure	% of TEH	% of government health appropriation	Per capita Recurrent expenses on health
	(100 million yuan)	(%)	(%)	(%)	(%)	(yuan)
1995	8.06	0.23	4.47	6.68	43.92	18.45
1996	8.87	0.21	4.15	6.29	41.74	20.17
1997	9.40	0.20	3.91	5.68	42.46	21.19
1998	10.23	0.21	3.57	5.47	39.27	22.95
1999	11.44	0.21	3.32	5.21	40.01	25.55
2000	12.51	0.21	2.90	4.88	38.26	27.22
2001	15.16	0.22	2.54	5.20	37.74	32.86
2002	18.50	0.24	2.47	5.56	40.01	39.81
2003	22.22	0.24	2.48	5.78	41.20	47.47

Table 10 Allocation of recurrent expenses on health on health institutes in Shaanxi province (1995-2003)

Unit: %

Year	City hospital	County hospital	Health center	Disease control and prevention institutes	Maternal and child health institutes	Others
1995	24.52	13.05	22.75	12.71	5.61	21.35
1996	22.15	12.94	24.17	13.71	5.81	21.22
1997	20.70	13.10	23.83	14.91	5.90	21.57
1998	23.41	12.08	24.02	13.82	6.19	20.48
1999	21.21	17.68	22.73	12.54	5.68	20.17
2000	18.26	18.07	22.06	14.00	6.07	21.53
2001	19.35	18.24	20.91	13.34	6.27	21.90
2002	19.20	17.40	21.77	13.91	6.37	21.35
2003	18.55	17.49	20.10	14.29	5.41	24.16

Note: Recurrent Expenses on Health in this table includes Recurrent Expenses on Traditional Medicine.

Table 11 Allocation of recurrent expenses on health on health institutes in Zhejiang province (1995-2003)

Unit: %

Year	City hospital	County hospital	Health center	Disease control and prevention institutes	Maternal and child health institutes	others
1995	22.07	8.76	25.70	15.20	3.66	24.62
1996	22.32	7.90	26.18	13.34	3.47	26.78
1997	22.70	6.73	26.53	14.23	2.99	26.82
1998	23.56	6.10	26.48	13.68	2.95	27.23
1999	21.92	14.55	23.86	13.35	2.80	23.52
2000	22.70	13.26	22.43	14.86	2.99	23.76
2001	26.87	12.09	19.73	16.41	3.01	21.89
2002	27.33	11.72	18.81	18.51	2.60	21.05
2003	25.47	11.30	16.06	16.19	2.52	28.45

Note: Recurrent Expenses on Health in this table includes Recurrent Expenses on Traditional Medicine.