

## ***Case Study***

# **NATIONAL HEALTH ACCOUNTS AND THEIR USE IN INFORMING HEALTH SECTOR REFORM**

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## 1. INTRODUCTION

You are the Director for Policy and Planning in the Ministry of Health in a middle income country. Your country is about to embark on significant health sector restructuring, and you have been requested to compile National Health Accounts data to inform this restructuring process. You discussed a data collection strategy with staff in your Directorate, and they have compiled the following information for the 1994/95 financial year (i.e. April 1994 to March 1995). Use the information presented below to complete the NHA matrix provided. Please note that the matrix represents flows from **financing intermediaries** to providers (i.e. you should identify who is actually paying the provider, rather than the original source of the funds).

## 2. OBJECTIVES OF CASE STUDY

- To “demystify” the process of National Health Accounts (NHA) data collection and matrix compilation;
- To provide insights into data sources for NHA and to highlight potential problems with some data sources;
- To develop skills in extrapolating certain expenditure estimates and in compiling NHA matrices;
- To highlight potential areas of double-counting when compiling NHA matrices;
- To develop skills in analysing NHA data to assess health system performance to inform health sector reform initiatives;
- To illustrate how non-financial data can assist in obtaining a more comprehensive health system analysis.

## 3. PUBLIC SECTOR FUNDING

### Ministry of Health

The data collection team was able to determine that a total of \$10,535 million of general tax revenue was allocated to the Ministry of Health. \$10,197 million was actually spent on health services provided by the Ministry, while \$338 million was transferred to local government health departments to subsidise the basic health services they provide. The distribution of Department of Health expenditure between service categories was as follows:

Administration/management	\$843 million
Academic and tertiary hospitals	\$4,636 million
Other public sector hospitals	\$3,897 million
Public sector basic health services (PHC)	\$821 million
Transfer to local government for PHC	\$338 million

### Ministries for the Security Forces

The team approached the Ministry of Defence, Ministry of Police and the Ministry of Correctional Services (Prisons) for information on spending on health services. In total, these three Ministries for Security Forces spent \$583 million on health services, funded out of allocations from general tax revenue. The service distribution of this expenditure was as follows:

Public sector hospitals (generalist)	\$466 million
Public sector basic health services (PHC)	\$117 million

#### Ministry of Education

It was determined that the Ministry of Education spent \$330 million on health-related education and training activities. This was also funded from general tax revenue.

#### Local government

There are 520 local governments in the country, and 311 of them provide health services. A sample survey of those local governments that provide health services was conducted. It was found that each of the surveyed local governments spends an average of \$1.81 million on health services. Approximately 40% of this expenditure is financed from local governments' own revenue (i.e. local rates and taxes), while about 60% is financed through transfers from the Ministry of Health. All of this money was spent on basic health services (i.e. PHC).

### **4. PRIVATE SECTOR FUNDING**

#### Private health insurance groups

There are about 326 private health insurance groups. Luckily for the data collection team, these insurance groups are required to report to the "Commissioner for Private Health Insurance Schemes". The Commissioner compiles a report every year, which indicates how Insurance Schemes have spent their money. The data collection team contacted the Commissioner, who indicated that a total of \$12,987 million had been spent. The Commissioner provided the following expenditure information:

Administration/management	\$1,709 million
Public academic and tertiary hospitals	\$320 million
Other public sector hospitals	\$130 million
Private hospitals	\$2,602 million
Private doctors and dentists	\$2,906 million
Private specialists	\$1,890 million
Private pharmacies	\$3,430 million

#### Private firms

Private firms contribute to health services in a number of ways. Firstly, they contribute to health insurance schemes on behalf of their employees (see section above). Secondly, they contribute to the Workmen's Compensation Fund (which primarily pays for health services required for work-related injuries). Thirdly, some firms provide health services at the workplace (ranging from small occupational health clinics to hospitals - e.g. in the mining industry).

The Commissioner of the Workmen's Compensation Fund has indicated that \$569 million was spent on health services in 1994/95. This expenditure was distributed as follows:

Public academic and tertiary hospitals	\$31 million
Other public sector hospitals	\$101 million
Private hospitals	\$437 million

Staff at one of the national universities had recently undertaken a survey of large firms, and had estimated that approximately \$472 million was spent on workplace health services in 1994/95. Approximately \$340 million was spent on hospitals and \$132 million was spent on clinics.

Direct household expenditure/Out-of-pocket payments

Every five years, the Central Statistical Office (CSO) conducts a “Household Survey of Income and Expenditure”. This survey includes a number of questions on health care expenditure. The last survey was conducted in September 1994, and covered about 5% of the 35 million population. On the basis of this survey, the NHA data collection team has estimated that the average ***per capita*** expenditure on different health services was as follows:

Health Insurance scheme contributions	\$112.03
Academic and tertiary hospitals	\$0.17
Other public sector hospitals	\$5.46
Public sector basic health services (PHC)	\$2.66
Private hospitals	\$2.28
Private doctors and dentists	\$37.20
Private pharmacies and drug sellers	\$71.77

## **5. DONORS**

There are only two donors who have any significant involvement in the health sector. Both were approached by the data collection team. Based on the information provided by the donors, it was estimated that \$131 million was spent on health-related activities by these donors. About \$68 million was devoted to public sector basic health services, while the other \$63 million was spent on health-related education and training activities.

## **6. DISCUSSION ISSUES**

Once you have completed the NHA matrix, discuss within the group what the data suggest about the structure of health services in the country. In particular, consider the following issues:

- The distribution of expenditure between different financing intermediaries;
- The distribution of expenditure between different service/provider categories; and
- Whether there is any additional data that would assist in interpreting the financial data.

In addition, discuss whether there are any gaps in the NHA data and whether any of the data compiled by the data collection team may be inaccurate.

Please discuss these issues before reviewing the data provided in the following pages.

	<b>FINANCING INTERMEDIARIES</b>									<b>TOTAL</b>
	<b>Ministry of Health</b>	<b>Ministry of Education</b>	<b>Ministries for Security Forces</b>	<b>Local Government</b>	<b>Donors</b>	<b>Private Insurance</b>	<b>Workmen's Compensation Fund</b>	<b>Firms</b>	<b>Households (Out-of-pocket)</b>	
<b>PROVIDERS</b>										
Public sector administration										
Public academic & tertiary hospitals										
Other public hospitals										
Public basic health services										
Education and training										
Private administration										
Private hospitals										
Private GPs and dentists										
Private specialists										
Private sold medicines										
Workplace hospitals										
Workplace clinics										
<b>TOTAL</b>										

## 7. FURTHER INFORMATION AND ISSUES FOR DISCUSSION

While reviewing the matrix, a particularly energetic (and ambitious) staff member in your directorate indicates that he took the opportunity, while collecting the data you had requested, to collect additional data that may be of assistance in assessing the health sector. He presents the following data for consideration by the NHA team.

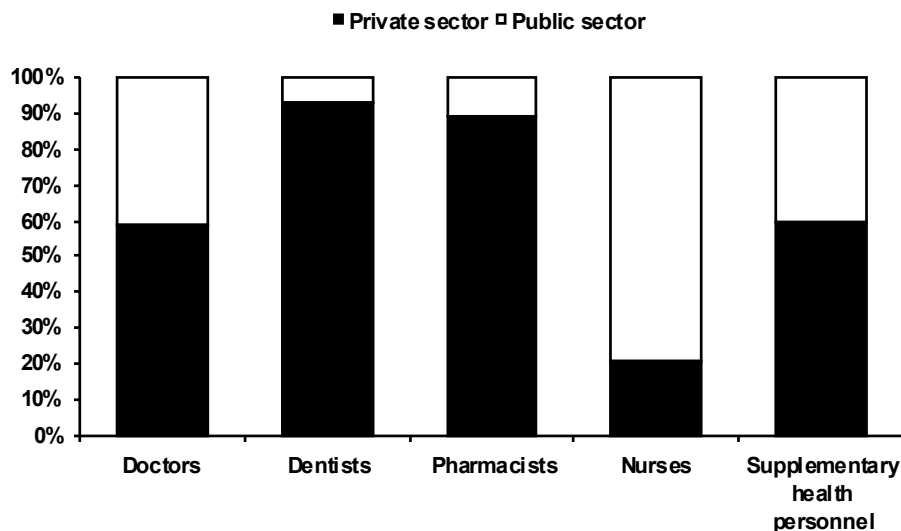
### Health Spending Relative to Available Economic Resources

Knowing that health expenditure is frequently expressed as a proportion of Gross Domestic Product (GDP), your energetic staff member contacted the Central Bank and determined that GDP in 1994/95 was estimated to be \$353,129 million.

### Public/Private Mix

It has been estimated that approximately 23% of the population have access on a routine basis to private sector providers.

**Figure 1: Percentage distribution of key categories of health personnel between the public and private sectors**



### Level of Care Distribution within the Public Sector

**Table 1: Percentage distribution of public sector health care personnel by level of care**

Facility type	General doctors	Specialist doctors	Nurses	Pharmacists
Academic hospitals	38.0	63.1	19.5	28.2
Tertiary hospitals	22.6	19.3	16.2	22.7
Secondary hospitals	7.1	5.6	12.6	12.9
Community hospitals	20.2	4.1	26.7	21.5
Chronic hospitals	2.0	4.2	7.9	4.3
Primary care services	10.1	3.7	17.0	10.5

**Table 2: Outpatient visits and their cost at government facilities**

	Total visits (million)	Total cost (\$ million)	Cost per visit (\$)
Clinics	31.7	951.1	30.0
Community hospitals	9.0	498.5	55.4
Secondary hospitals	7.0	398.2	56.9
Tertiary hospitals	5.8	441.5	75.5
Academic hospitals	11.5	1,374.3	119.8
Chronic care hospitals	0.4	13.1	33.0
<b>TOTAL</b>	<b>65.4</b>	<b>3,676.7</b>	

#### Geographic Distribution within the Public Sector

**Table 3: Summary of key socio-economic, mortality and public health service resource\* distribution indicators between geographic areas**

Province	Poverty rates (% population)	IMR	Hospital beds per 1,000 population	Doctors per 100,000 population	Nurses per 100,000 population	Total per capita expenditure (\$)
Province A	78	91	2.47	12.49	326.49	245.08
Province B	66	103	2.56	14.67	298.36	307.19
Province C	19	31	3.74	34.05	434.04	577.05
Province D	53	66	3.38	14.00	309.94	274.17
Province E	52	54	2.00	7.52	179.81	158.25
Province F	57	22	3.85	9.58	249.51	265.26
Province G	77	59	2.46	8.27	228.81	181.92
Province H	57	70	2.43	9.74	278.66	203.59
Province I	23	34	3.69	43.70	606.07	700.38
<b>TOTAL</b>	<b>53</b>	<b>62</b>	<b>2.93</b>	<b>16.97</b>	<b>326.59</b>	<b>316.31</b>

\* Public sector health services indicators expressed relative to population dependent on public sector services, i.e. population excluding those covered by private insurance

#### Discussion Issues

- Does the additional information provided above contribute to interpreting issues arising from the NHA matrix? If so, in what way?
- Based on the NHA matrix and the additional information provided above, what do you feel are the key challenges facing the health sector in this country?

## **8. ACKNOWLEDGEMENT**

Data for this case study were adapted from: McIntyre D, Bloom G, Doherty J, Brijlal P (1995). *Health expenditure and finance in South Africa*. Durban: Health Systems Trust and World Bank.