

Preliminary costing estimates for National Health Insurance

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by

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Introduction

The Cosatu position in favour of National Health Insurance provides a strong moral and political standpoint. What are the cost implications?

A team consisting of Cosatu, Nehawu and Sama officials joined by academics from the Universities of KwaZulu-Natal and the Western Cape, and Johns Hopkins, have begun the process of calculating the fiscal impact and logistical feasibility of NHI. The first stage, now available, is the presentation of data, packaged in two tables. The next stage will entail revision of the cost estimations based upon improved data and more detailed assumptions about the rates of health care utilization and extent of the health care packages on offer. Once we have more clarity on the utilization rates and packages, the implications for South Africa's already stressed health system will be analysed by Professor David Sanders. A final document will be ready for circulation to the professional community and public by 20 August.

In the meantime, there are several decisions to be made about data use, as well as the increased utilization rates we can expect in a shift to an NHI-funded system.

How utilization rates are estimated

In the models presented below, utilization rates are calculated using the Council for Medical Schemes (CMS) Annual Report 2006/07 and government's General Household Survey 2006 (GHS). The rates of hospitalization and the use of public clinics are interpolated from monthly utilization rates in the GHS, to annual proportions. Hospitalisation rates would decline if patients received improved primary and secondary care, compared to the present, as a result of NHI. The percentages of medical profession visits in the medical scheme group are taken from the CMS, while rates for the uninsured group are interpolated using relative risk ratios calculated from the GHS. Then, the utilization rates in the medical scheme group are adjusted for age, gender and health status for the total population.

How cost estimates are made

The cost analysis is based on updated population averages for the health services offered. We assumed the number of visits per patient will remain the same as exist in the current medical schemes. The cost of medicines, and supplementary and complementary services are interpolated from the ratio of these expenditures to total expenditures on physicians, hospitals, specialists and dentists. As for data, the cost figures for public providers are taken from the Health Finance Report, and that of medical schemes is from CMS 2006/07.

Other assumptions

We have made several other assumptions about the benefits of NHI that require discussion. How much of South Africa's health spending is consumed by administrative costs, and how much can be saved once NHI is implemented? For hospitals, the percentage of revenue spend on administration is assumed to be 26%, and savings are assumed to be 22% from NHI single-payer centralization of administration, figures based on studies in the U.S. and Canada. For physician costs, the percent of revenue spend on administration is assumed to be 30%, and savings are assumed to be 36%. As for clinical care expenditure, we have estimated savings that will arise from bulk purchasing power at 22% of total revenue (which may be an overestimate).

Political choices

There are several important policy options that derive from political objectives.

The most important is the priority Cosatu puts on health care in relation to other social spending priorities. What is the budget constraint that we should be considering? How much of South Africa's income should be spent on healthcare? In 2002, South Africa's health/GDP spending was 8.7%, the 32nd highest in the world. The world average is 6.2%.¹ *Cosatu should bear these figures in mind, in*

¹ http://www.nationmaster.com/graph/hea_tot_exp_on_hea_as_of_gdp-health-total-expenditure-gdp. Countries that spend more national income on health care include wealthy and poor states:

- #1 United States:14.6%
- #2 Cambodia:12.0%
- #3 Lebanon:11.5%
- #4 Switzerland:11.2%
- #5 Sao Tome and Principe:11.1%
- #6 Monaco:11.0%
- #7 Germany:10.9%
- #8 Marshall Islands:10.6%
- #9 Togo:10.5%
- #10 Uruguay:10%
- #11 Iceland:9.9%
- #12 Malawi:9.8%
- #13 Niue:9.7%
- #14 France:9.7%
- #15 Malta:9.6%
- #16 Canada:9.6%
- #17 Norway:9.6%
- #18 Greece:9.5%
- #19 Australia:9.5%
- #20 Portugal:9.3%
- #21 Costa Rica:9.3%
- #22 Jordan:9.3%

advocating higher social spending. We are comfortable advocating an increase in expenditure to the 10-12% range, but this should be discussed as part of overall People's Budget brainstorming. The model suggests that health care spending of R205 billion can be financed by NHI, with required new revenue of R188 billion.

The second is the extent to which improvement can be in public sector human resources capacity so as to ensure the integrity of health systems once NHI is implemented. This area of work, which is one of the core areas of doubt in many policy-makers minds (as well as that of the public), continues. As a prerequisite, we need to be sure that Cosatu is comfortable with the assumptions about the services and costs that are discussed in the tables below.

The precise mix of public and private health care supply can be debated, and many of the estimates will be subject to debate over assumptions. However, the most important argument that should be tested in discussion, is the need for an NHI to increase overall budgetary revenues quite substantially. In return, the society will have a potential improvement in health that can easily be shown to have productivity merits, and by centralizing the financial mechanism into a single-payer state scheme, substantial administrative savings can be realized.

We await feedback on whether the assumptions and political choices we are making here closely correspond to Cosatu leadership's view. And we will adjust our work accordingly and begin assessing implications for health systems.

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- #23 Sweden:9.2%
 - #24 Bosnia and Herzegovina:9.2%
 - #25 Palau:9.1%
 - #26 Belgium:9.1%
 - #27 Israel:9.1%
 - #28 Argentina:8.9%
 - #29 Panama:8.9%
 - #30 Denmark:8.8%
 - #31 Netherlands:8.8%

Table 1: Current Health Expenditures and Utilization in 2006

Category	Public	Medical Schemes	
Total Expenditure	57,302,281,682	59,590,062,000	116,892,343,682
Total Population	40,263,686	7,127,343	47,391,029
Total Expenditure per person	1,423	8,361	
Total Public Health Expenditures as a percentage of Government Budget	12.18%		
Utilization Rates	No Insurance	Medical Scheme	Adjusted Utilization for NHI
Hospital	28.32%	32.64%	25.54%
Private Doctor	20.50%	84.99%	67.90%
Specialist	7.27%	52.12%	44.00%
Dentist	8.10%	24.29%	18.51%
Public Clinic	59.28%	8.64%	6.99%
Total Cost (in millions)	Public	Medical Scheme	
Hospital	28,580	15,193	
Primary Care	9,468	4,393	
Private Specialist	N	10,973	
Dentist	211	1,738	
Public Clinic	9,468		
Cost per patient	Public	Medical Scheme	
Hospital	2,645	9,349	
Primary Care	387	725	
Private Specialist		2,954	
Dentist	65	1,004	

Table 2: Total cost of NHI - Assumptions

Administrative Savings

Proportion of Administrative Cost in Total Hospital Revenue	26%
Savings under NHI as a Percentage of Administrative costs	22%
Proportion of Administrative Cost in Total Physician Revenue	30%
Savings under NHI as a Percentage of Administrative costs	36%
Administrative Cost of NHI as % of Total Cost	3%
Savings in clinical care expenditures due to bulk-purchasing power	22%

Public-Private Mix of Providers

Percentage of Public Provision	Current	Model Specific Rates
Hospitals	83%	50%
Doctor	16%	50%
Specialists	na	na
Dentist	65%	50%
Price of Services in Private Sector/Public Sector ²	70%	

² Fish, T, et al. (2002) The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001, The Center for Actuarial Research Report.

Table 3: NHI cost estimates with different scenarios

Category	All Private	All Public Model 1: Based on Price Ratio	All Public Model 2: Based on Survey	Current Public- private mix	Model Specific Rates
Hospitals	113,163,180,125	79,214,226,087	32,012,893,776	45,608,031,372	72,588,036,951
Private Doctor (GP)	23,338,946,002	16,337,262,201	12,443,892,121	21,582,050,706	17,891,419,061
Specialists	61,594,923,367	43,116,446,357	43,116,446,357	61,594,923,367	61,594,923,367
Dentist	8,803,928,539	1,936,864,278	567,741,693	1,523,783,703	4,685,835,116
Public Clinics	1,280,724,196	1,280,724,196	1,280,724,196	9,468,000,000	1,280,724,196
Medicine	55,104,537,743	37,447,684,022	23,474,841,307	34,705,517,867	41,750,402,721
Supplementary and Allied	26,013,923,592	17,678,420,521	11,082,076,960	16,383,890,093	19,709,661,506
Complementary Medicine	2,386,537,360	1,621,831,897	1,016,678,264	1,503,070,679	1,808,179,507
Administration	9,021,238,172.90	6,143,302,872.99	3,865,833,855.91	5,949,564,983.11	6,844,613,889.41
Total	300,707,939,097	204,776,762,433	128,861,128,530	198,318,832,770	228,153,796,314
Savings due to Single Payer					
Administrative Savings from Hospitals	6,472,933,903	0	0	1,084,413,020	3,236,466,952
Administrative Savings from Physicians	10,123,682,174	6,630,181,866	6,061,832,658	9,096,191,132	1,260,303,084
Savings in clinical care expenditures due to bulk- purchasing power	64,171,074,203	0	0	22,700,097,538	29,534,549,154
Total Savings	80,767,690,280	6,630,181,866	6,061,832,658	32,880,701,689	34,031,319,190
Total Savings as a % of Total Spending	27%	3%	5%	17%	15%
Total Cost of NHI	219,940,248,816	198,146,580,567	122,799,295,872	165,438,131,081	194,122,477,124
Other Health Care Expenditures in Public Sector	10,943,000,000	10,943,000,000	10,943,000,000	10,943,000,000	10,943,000,000
Total Health Care Expenditures	230,883,248,816	209,089,580,567	133,742,295,872	176,381,131,081	205,065,477,124
Total Health Care Expenditures per capita	4872	4412	2822	3722	4327
Total Health Care Expenditures as a % of GDP	13.15%	11.91%	7.62%	10.05%	11.68%
Required Revenue	214,393,491,522	192,599,823,273	117,252,538,578	159,891,373,787	188,575,719,830