

Financing National Health Insurance:

***What can
South Africa
afford?***

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presented to the
roundtable

*National Health Insurance:
Exploring key questions*

Oxfam Australia
26 May 2010

Cosatu National Health Insurance Research Process, 19 June 2009

1) ORIGINAL COSTING ESTIMATES

Patrick Bond, PhD (overall coordinator)

Centre for Civil Society, School of Development Studies

University of KwaZulu-Natal

and Sule Calikoglu, PhD

Johns Hopkins University Bloomberg School of Public Health

2) BENEFITS

2.1 LABOUR PRODUCTIVITY

Christopher Malikane, PhD

Senior Lecturer, University of the Witwatersrand

2.2 MORBIDITY/MORTALITY REDUCTION AND MACROECONOMIC MULTIPLIERS

Bianca Frogner, PhD

Assistant Professor, George Washington University Public Health

3) HUMAN RESOURCES REQUIREMENTS

David Sanders, PhD and Bridget Lloyd, PhD

University of the Western Cape School of Public Health

Polokwane promises ANC congress, December 2007

* "ON HEALTH,

52. Education and health should be the two key priorities of the ANC for the next years.

53. Reaffirm the **implementation of the National Health Insurance System** by further strengthening the public health care system and ensuring adequate provision of funding." ...

ANC Today, January 2009

* "The establishment of National Health Insurance is predicated on two core principles:

- "First, the right to health: the state must take reasonable legislative and other measures, within its resources, to achieve the progressive realisation of the right to access health care services. A key aspect of ensuring access to health care is that **services must be free of any charges at the point of use.**

- "Second, social solidarity and universal coverage: The commitment to social solidarity in the South African health system means a **mandatory contribution** by South Africans to funding health care according to their ability to pay. Given the massive income inequalities, **progressive funding mechanisms must be used (i.e. the rich should contribute a higher percentage of their income to funding health services than the poor) and the government contributes for the indigent.**"

Discourses of NHI critics



* "We want the currently-incompetent/corrupt/deadly public health system to work better!" - and without it working, how dare government bureaucrats propose NHI? *(subtext is always that state cannot do anything properly);*

* "We are worried about our world-class private healthcare sector!" - which works very very very well, and we don't want to alienate all those excellent doctors with an NHI that drives them into the sea *(subtext is that private sector - both insurance and health services - is sacrosanct and to mess with it will 'send the wrong signals' to investors);*

* "We think NHI will cost way too much!" - 20% of GDP! \$1 trillion! (sic) *(subtext is: hysteria);*

* "The NHI proponents are keeping everything secret and haven't done any detailed costing of the programme!" *(ok, on the first part they have a point)*

Most recent: Econex, February 2010

Although one may question some of the assumptions of Calikoglu & Bond, the methodology is quite useful. They could perhaps also have explained better how their model hangs together and how some of the data were obtained.¹⁰ A later version of the paper by Bond and others,¹¹ essentially presents slightly different versions of the same underlying results. In that version, the presumed savings that they argue can be implemented – 49 percent reduction on private sector costs – are even more unlikely, like their assumption that a NHI would dramatically reduce avoidable mortality (e.g. from 151 to 0 per 100,000 from tuberculosis, 134 to 4 from other infectious diseases, and 85 to 1 for respiratory diseases).

critique of Calikoglu, Bond, et al study for Nehawu and Cosatu

Econex

Trade, Competition & Applied Economics

NHI NOTE 7
FEBRUARY 2010

Estimating the Financial Cost of the NHI Plan

Countervailing pro-NHI discourses

- * "How do we improve the public health system *without* much higher funding flows, and how do we do that *without* tapping the private insurance sector's market?"
- * "The NHI does not imply the END of the private healthcare sector tomorrow - only that spiralling costs be controlled and a better spread of resources achieved"
- * "With economic growth, NHI should come in at less than 9% of GDP within five years, roughly the same as now even though a larger share of the budget would go to healthcare"

*** "The detailed costing of the programme is a DoH job, but preliminary indications are that a package similar to what people currently receive can be provided within five years, to everyone in the country, for just over R150 billion (in 2006 rand projected forward), with a substantial discount on existing medical aid costs, but increased taxation for all."**

*** "Savings are expected in various operations, including bulk buying, cuts in administrative waste, better-directed treatment regimes, capitation, and more appropriate utilisation rates."**

*** "Implementation could be via an agency that operates very similar to - and in close collaboration with - SARS, so as to ensure efficiency, good service and transparency."**

*** "Substantial socio-economic benefits - 'positive externalities' - can boost overall welfare and GDP; employment opportunities will abound with expansion of health services to all."**

Relative Health Spending

Countries that spend more national income on health care than SA:
SOUTH AFRICA spends 8.7%, #32 in the world (last available data)

#1 United States:14.6%	#16 Canada:9.6%
#2 Cambodia:12.0%	#17 Norway:9.6%
#3 Lebanon:11.5%	#18 Greece:9.5%
#4 Switzerland:11.2%	#19 Australia:9.5%
#5 Sao Tome and Principe:11.1%	#20 Portugal:9.3%
#6 Monaco:11.0%	#21 Costa Rica:9.3%
#7 Germany:10.9%	#22 Jordan:9.3%
#8 Marshall Islands:10.6%	#23 Sweden:9.2%
#9 Togo:10.5%	#24 Bosnia and Herzegovina:9.2%
#10 Uruguay:10%	#25 Palau:9.1%
#11 Iceland:9.9%	#26 Belgium:9.1%
#12 Malawi:9.8%	#27 Israel:9.1%
#13 Niue:9.7%	#28 Argentina:8.9%
#14 France:9.7%	#29 Panama:8.9%
#15 Malta:9.6%	#30 Denmark:8.8%
	#31 Netherlands:8.8%

Health Expenditures in 2006

Category	Public	Medical Schemes	Total
Total Expenditure	R57.3 bn	R59.6 bn	R116.9 bn
Total Population	40,263,686	7,127,343	47,391,029
Total Expenditure per person	R1,423	R8,361	
Public Health spending as % of Budget	12.18%		

Current Healthcare Costs

Total Cost (R billions)	Public	Medical Scheme
Hospital	28.6	15.2
Primary Care	9.5	4.4
Private Specialist	Na	11.0
Dentist	0.2	1.7
Public Clinic	9.5	

Current Healthcare Costs/Patient

	Public	Medical Scheme
Hospital	R2,645	R9,349
Primary Care	R387	R725
Private Specialist		R2,954
Dentist	R65	R1,004

Assumed NHI savings according to international experience

Proportion of Admin Cost in Total Hospital Revenue	26%
Savings under NHI as a Percentage of Admin Costs	22%
Proportion of Admin Cost in Total Physician Revenue	30%
Savings under NHI as a Percentage of Admin Costs	36%
Administrative Cost of NHI as % of Total Cost	3%
Savings due to Gate-keeping	16%
Savings due to Capitation in ambulatory sector	16%
Price adjustment using low-cluster group	12%

Definitions

<p>Savings due to Gate-keeping</p>	<p>More effective management of case loads through a single financing agency which can assure more efficient allocation of patients to service delivery agencies, by availability (capacity utilisation), geography and cost of suppliers.</p>
<p>Savings due to Capitation in ambulatory sector</p>	<p>Financing can be paid by various means, of which the most simple is to contract for a set amount of health benefits for each enrolled person. This would apply generally, but the main studies of outpatient (ambulatory) care - blood tests, X-rays, endoscopy and the like – suggest major savings are appropriate through capitation.</p>
<p>Price adjustment using low-cluster group</p>	<p>There are four clusters of patients with very different cost structure. According to this study, the difference between high-end users and low-end users is 33%. The difference in the cost of services between clusters might be due to variations in prevalence rates of diseases, presentation or manifestation of these conditions, provider choice, and demographic factors. To adjust for these differences, we used the percent difference of average cost of low-end users from the overall cost, which is 12.34%.</p>

What should NHI finance?

Assumption for NHI costing on initial Public-Private Mix of Providers is based on current percentage of public provision

Hospitals	83%
Doctors	16%
Specialists	n.a.
Dentists	65%

NHI cost estimates under different scenarios: private only, public only & public/private mix

R billion	using existing private sector rates	using existing public sector rates	adopting current public/private mix
Hospitals	113.1	32.0	45.6
Private Doctor (GP)	23.3	12.4	21.6
Specialists	61.6	32.8	61.6
Dentist	8.8	0.6	3.4
Public Clinics	1.3	1.3	1.3
Supplementary, Allied	24.7	9.8	16.6
Complementary Medicine	2.2	0.9	1.5
Medicine	52.4	23.9	40.4
Administration	8.9	3.5	5.9
Out of Pocket Payments	48.1	19.0	32.1
Total	344.5	136.3	230.1

Adjustments to incorporate NHI savings

R billion	existing private sector rates	existing public sector rates	adopting current public/private mix
Administrative Savings from Hospitals	6.5	Na	1.1
Administrative Savings from Physicians	10.1	Na	9.1
Gatekeeping	55.1	Na	36.8
Capitation	55.1	Na	16.5
Price difference (low cluster)	42.5	Na	12.7
Total Savings	169.4	Na	76.2
Total Savings as a % of Total Spending	49%	Na	33%
Total Cost of NHI	175.1	136.3	153.8

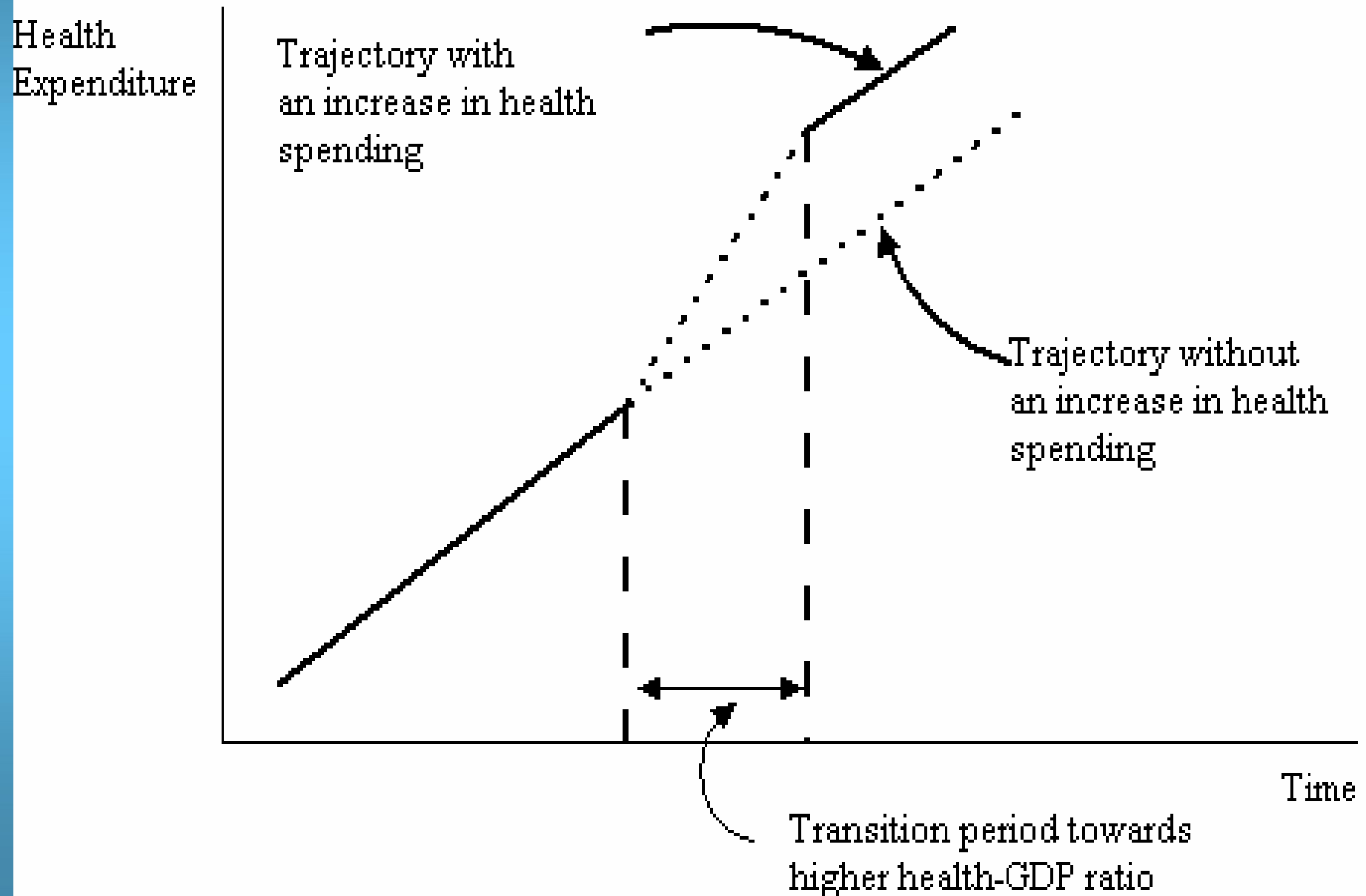
Additional and total healthcare spending

R	using existing private sector rates	using existing public sector rates	adopting current public/private mix
Other: HIV and AIDS, Health Facilities Infrastructure, Emergency Medical Services, Health Sciences and Training, Health Care Support, Coroner Services and Nutrition Programs	11,8 bn	11.8 bn	11.8 bn
Total Health Care Expenditures	186.9 bn	148.1 bn	165.2 bn
Total Expenditures per capita	3945	3125	3495

Funding required (Rbn)

R bn	using existing private sector rates	using existing public sector rates	adopting current public/private mix
Health Care Spend	186.9	148.1	165.2
State subsidies for Med Aids	4	4	4
State Spending on Civil Servants	5.8	5.8	5.8
Existing Public Health Budget	58.2	58.2	58.2
Existing Medical Aid (15% discount)	51	51	51
Required revenue	76.9	28.1	46.2

Paying for the NHI transition, years 1-5



Balancing costs with benefits: productivity, higher life expectancy, Keynesian multiplier

- Long-term 20% labour productivity increase
- Slowdown and reversal of life expectancy fall
- Up to 184,085 fewer premature deaths/yr

National Health Insurance: Boost to long-term health of labour force (Dr Chris Malokane)

The health system affects the effectiveness of labour in the production process. The introduction of an NHI system must improve the efficiency of the health sector and increase the quality of the health service if it is to have long run effects on the growth rate of the economy. Improving the state of health of the labour force is not a short run consideration. Therefore if expenditure on this sector is contemplated, *the true benefits that will accrue to the economy must be conceptualized from a long-run perspective. An increase in health spending now must shift long run economic growth upwards, so that the tax base expands in such a way that the resultant tax collections are enough to repay the additional public debt contracted, plus interest accumulated.*

Main Economic Benefits

Dr Bianca Frogner

- R 1,046 increase in economic output with every R 1,000 health care investment (5% Keynesian macroeconomic multiplier)
- Potential source of job creation especially for skilled and unskilled workers

Comparison Group

1. Countries that spend 8.7 +/- 1% of GDP on health care
 - a. Countries with full coverage, publicly financed (subset of 1)
 - i. Countries with traditional single payer systems (subset of 1a)

Life Expectancy

- Taiwan saw acceleration in gain of life expectancy after adoption of NHI
- Single payer systems have higher average life expectancy than other systems

Life Expectancy in Countries with Similar Resource Allocation to Health Care, 2005

	Life Expectancy
South Africa ^a	51.0
Countries with health care as 8.7% ± 1% of GDP ^b	79.6
Universal coverage, primarily publicly funded ^c	79.5
Single payer systems ^d	80.0

Current Health Status

- 50% of top 10 causes of death are due to infectious diseases including pneumonia, TB, and HIV
- The other half are mostly due to chronic diseases

Top 10 Specific Causes of Registered Deaths in South Africa, 2005

Cause of Death	Total Number
1. Tuberculosis of respiratory system	65,903
2. Pneumonia	44,882
3. Diseases of pulmonary circulation and other forms of heart disease	26,533
4. Cerebrovascular disease	24,408
5. Diabetes mellitus	18,416
6. Bronchitis chronic and unspecified emphysema and asthma	15,470
7. HIV disease	14,493
8. Accidents and adverse events	12,811
9. Hypertensive disease	11,851
10. Acute myocardial infarction	9,499

Avoidable Mortality

- Defn: Premature mortality avoided through timely, efficient treatment and prevention.
- Defn: Deaths under age 75
- merely for comparative purposes, what would SA achieve if we had mortality rates of single payer countries?:
 - Up to 184,085 fewer premature deaths

Avoidable Mortality per 100,000 People, 2005

	South Africa	Single Payers
Infectious diseases ^d	285	4
<i>Tuberculosis</i>	151	0
Malignant neoplasms ^e	53	115
<i>Breast</i>	4	10
<i>Cervix uteri</i>	5	1
Endocrine, nutritional, and metabolic diseases	18	3
<i>Diabetes mellitus</i> ^f	4	1
Circulatory disease	112	73
<i>Hypertensive disease</i>	16	2
<i>Cerebrovascular disease</i>	34	14
Respiratory diseases ^f	85	1
<i>Pneumonia</i>	59	0
Diseases of digestive system	30	13
Genitourinary diseases	13	3
Congenital CVD anomalies	1	1
Ischemic heart disease ^g	18	39
Total	597	213

Age-Standardized DALYs per 100,000 people, 2004

	South Africa	Single Payers
Infectious diseases ^d	22,646	158
<i>Tuberculosis</i>	2,484	4
Malignant neoplasms	1,503	1,353
<i>Breast</i>	156	163
<i>Cervix uteri</i>	146	25
Endocrine, nutritional, and metabolic diseases	2,284	450
<i>Diabetes mellitus</i>	839	229
Cardiovascular disease	3,559	1,085
<i>Hypertensive disease</i>	363	23
<i>Cerebrovascular disease</i>	1,284	272
Respiratory diseases/infections	2,314	804
Diseases of digestive system	936	317
Genitourinary diseases	427	68
Congenital CVD anomalies	270	232
Ischemic heart disease	990	513
Total	33,939	4,468

Health care consumption and income multiplier in South Africa, 2000 and 2005

	Health Care Consumption	Income
2000	R 1,415	R 36,314
2005	R 2,224	R 54,146
Difference (2005-2000)	R 809	R 17,832

A one unit increase in investment creates a:

$$\frac{1}{1 - b(1 - t)}$$

Increase in the economic output where b is the marginal propensity to consume health care given an increase in (after tax, t) income.

The result is 1.046.

Correlation of Per Capita Health Care Consumption and Income, 2000 and 2005

	South Africa	Countries with health care as 8.7% ± 1% of GDP ^a
Physicians	8	30
Nurses	41	100
Other Health Employees	20	190
Total	69	320

To achieve human resource levels as comparison countries, more health employees are needed, with further multipliers.